BULLETIN
OF THE
CHEMICAL SOCIETY
OF JAPAN

Volume 42

1969

Nobufusa SAITO, Editor

Michio SHIOTA, Assistant Editor

Editorial Board

Yuzaburo FUJITA
Masashi IMAMURA
Naokazu KOIZUMI
Yoichiro NAGAI
Kunio NAKANO
Shigeru OAE
Motowo TAKAYANAGI
Takahiko TSUYUKI
Yoichi IITAKA
Tomitaro ISHIMORI
Rokuro KURODA
Ichiro NAKAGAWA
Masao NAKAZAKI
Yukiyoshi SASAKI
Jiro TANAKA
Koichi YAGI
Hideo IMAI
Mitsuhiro KINOSHITA
Keiryo MITSUHASHI
Ryohei NAKANE
Yujiro NOMURA
Kahei TAKASE
Katsumi TOKUMARU

Published by

The Chemical Society of Japan

5, 1-Chome, Kanda-Surugadai, Chiyoda-ku, Tokyo, Japan

© 1969 by The Chemical Society of Japan

CONTENTS OF VOLUME 42, 1969

No. 1

General and Physical

Study on Fragmentation Process of Thymidine by Mattauch-Herzog Geometry High Resolution Mass Spectrograph ..... S. TSUNAKAWA 1

Ultrasonic Relaxation of Water-Dioxane System ..... K. ARAKAWA and N. TAKENAKA 5

The $n \rightarrow \pi^*$ Bands of Phenyl Carbonyl Compounds, α-Diketones, and Quinones at Low Temperatures..... A. KUBOYAMA, R. YAMAZAKI, S. YABE and Y. UEHARA 10

Transition Energy Diagram for Solvated Electrons and Its Application to the Interpretation of Their Absorption Spectra..... S. NODA, K. FUEKI and Z. KURI 16

Studies of the Precipitation of Humic Acid by Cationic Polyelectrolytes..... H. KUMANOMIDO 20

Studies of the Transient Intermediates of a Thiopyronine Aqueous Solution under Flash Excitation ..... M. MORITA and S. KATO 25

Heat of Mixing for Binary Mixtures: Pyridine Derivatives + Benzene, and + Cyclohexane Systems..... T. MURAKAMI, S. MURAKAMI and R. FUJISHIRO 35

Anomalous Magnetic Properties of Stable Crystalline Phenoxyl Radicals ..... K. MUKAI 40

Molecular Orbital Treatment of Nitric Oxide Radicals. I. Electronic Structure and Spectrum of the H_2NO Radical ..... O. KIKUCHI 47

Photochemistry of Acetanilide. II. The Primary Processes in the Photochemical Reaction .. .. H. SHIZUKA 52

Photochemistry of Acetanilide. III. The Secondary Processes in the Photochemical Reaction ..... H. SHIZUKA 57

Mechanism of a Stereospecific, Photosensitized, Cyclization Reaction of 3-Methylene-1,5-heptadiene ..... S. KITA and K. FUKUI 66

Electronic Spectra of Crystalline TCNQ Anion Radical Salts. I. Simple Salts..... Y. IIDA 71

Electronic Structure of Lone Pairs. I. Azine Compounds and Quinones .... T. YONEZAWA, H. YAMABE and H. KATO 76

Thermodynamic Properties of Neopentane from 4°K to the Melting Point and Comparison with Spectroscopic Data ..... H. ENOKIDO, T. SHINODA and Y. MASHIKO 84

The Crystal Structure of Two Crystalline Polymorphs of *N*-(*p*-Methoxyphenyl-3-propyl)-*p*-bromobenzamide..... N. YASUOKA, N. KASAI and M. KAKUDO 91

Infrared Spectra of a Few Transfer Ribonucleic Acids..... ..... M. TSUBOI, K. SHUTO, S. TAKEMURA and S. NISHIMURA 102

Deuteron Magnetic Resonance Study in $Co(ND_3)_6Cl_3$..... T. ITO and T. CHIBA 108

Effect of Additives in the Radiolysis of Gaseous Ammonia at High Densities .... M. NISHIKAWA, K. KURODA and N. MATSUURA 116

NOTES:

Contact Potential in Vacuum for Titanium Dioxide Powder..... T. IIDA and H. NOZAKI 243

Reactive States of Acridine in Alcohols and the pK Value of T(n-π^*) State as judged from the pH Dependence of the Photoreduction Quantum Yield..... ..... K. NAKAMARU, S. NIIZUMA and M. KOIZUMI 255

Space Effects of Tetra-*n*-alkyl Ammonium Ions on the Electrical Conduction of Tetracyanoquinodimethane Salts ..... H. KUSAKAWA and K. AKASHI 263

On the Behavior of the Mixture of Trimethylstibine Sulfide and Tin(IV) Halides in Solution.. ..... M. SHINDO, Y. MATSUMURA and R. OKAWARA 265

A Comparative Study of Electron Capture by Solutes in γ-Irradiated 2-Methyltetrahydrofuran Glass at 77°K..... T. WAKAYAMA, T. KIMURA, T. MIYAZAKI, K. FUEKI and Z. KURI 266

Poisoning Effect of Carbon Disulfide on the Liquid-phase Hydrogenation of Acetone over a Raney-Nickel Catalyst ..... S. KISHIDA and S. TERANISHI 270

Analytical and Inorganic

The Optical Resolution and Circular Dichroism of Cobalt(III) Complexes of the $[Co(O–O)_2(O–N)]^{2-}$ Type..... K. YAMASAKI, J. HIDAKA and Y. SHIMURA 119
On the Presence of Tetrafluoroborate Ions in Natural Waters ..... T. ONISHI 127
Nickel(II) and Copper(II) Complexes of *C,N*-Disubstituted Salicylideneimines with Steric Hindrance..... S. YAMADA, A. TAKEUCHI, K. YAMANOUCHI and K. IWASAKI 131
Trimethylenediamine Complexes. I. Some Trimethylenediamine Complexes Derived from *trans*-$[CoCl_2tn_2]Cl$ in Methanol..... H. KAWAGUCHI, N. YANO and S. KAWAGUCHI 136
Polarographic Studies of Dissolved Oxygen in DMSO-Water Mixtures..... T. FUJINAGA, K. IZUTSU and T. ADACHI 140
Spectroscopic Studies of Polynuclear Complexes. I. Preparations and Circular Dichroisms of Tetrakis(*l*-propylenediamine)dicobalt(III) Complexes Containing μ-Amido Group..... Y. SASAKI, J. FUJITA and K. SAITO 146
The Oxovanadium(IV) Complexes of Schiff Bases Obtained from Substituted Salicylaldehydes and Alkyl Amines..... S. YAMADA and Y. KUGE 152
Reactions of Nickel(II), Copper(II) and Palladium(II) Complexes of Bis(acetylacetone)ethylenediimine with Nitric Oxide ..... I. MASUDA, M. TAMAKI and K. SHINRA 157
Kinetics of Multidentate Ligand Substitution Reactions. IV. Substitution Reactions of BT with Cobalt(II) and Nickel(II) Chelates of 1,2-Diaminocyclohexanetetraacetic Acid and Diethylenetriaminepentaacetic Acid ..... M. KODAMA, C. SASAKI and K. MIYAMOTO 163
Metal Complexes with Amino Acid Amides. II. Preparations and Circular Dichroism Behavior of the Copper(II) Complexes ..... T. KOMORITA, J. HIDAKA and Y. SHIMURA 168

NOTES:

Spectrophotometric Determination of Iron(III) with Rhodamine B and Confirmation of the Composition of Its Complex ..... H. IMAI and T. YAMADA 237
A Systematic Cation Exchange Separation with Oxalate..... T. NOZAKI, O. HIRAIWA, C. HENMI and K. KOSHIBA 245
Electrolytic Separation with Glassy-Carbon Electrodes Prior to Emission Spectrography: Determination of Traces of Silver in High-Purity Zinc..... A. MIZUIKE, N. MITSUYA and K. YAMAGAI 253
Halogenation Reaction of Bis(dithioacetylacetonato)Complexes of Cobalt(II) and Nickel(II).. ..... A. FURUHASHI, K. WATANUKI and A. OUCHI 260
The Spectrophotometric Determination of Anions by Solvent Extraction with Metal Chelate Cations. V. Thiocyanate with Tris(1,10-phenanthroline)iron(II) Chelate ..... Y. YAMAMOTO, T. TARUMOTO and Y. HANAMOTO 268

Organic and Biological

The Alkaline Hydrolysis of Halophenols ..... S. OAE, N. FURUKAWA and T. ASARI 177
Studies of Acenaphthene Derivatives. XVI. The Wittig Reaction with Acenaphthenequinone ..... O. TSUGE, M. TASHIRO and I. SHINKAI 181
Studies of Acenaphthene Derivatives. XVII. The Reaction of Benzylideneacenaphthenone with Hydrazines ..... O. TSUGE, I. SHINKAI and M. TASHIRO 185
Synthesis of Albonoursin ..... C. SHIN, Y. CHIGIRA, M. MASAKI and M. OHTA 191
The Synthesis of Cyclic α-Amino Acids. II..... M. KINOSHITA, H. YANAGISAWA, S. DOI, E. KAJI and S. UMEZAWA 194
A New Synthesis of Tephrosic Acid ..... K. FUKUI, M. NAKAYAMA and T. HARANO 199
Studies of Organic Reactions of Metal Carbonyls. XV. The Reaction of Potassium Iron Carbonylates with Various Kinds of Olefin Oxides..... Y. TAKEGAMI, Y. WATANABE, T. MITSUDO and H. MASADA 202

Studies of the Organic Reactions of Metal Carbonyls. XVI. Solvent Effects on the Hydroformylation of Propylene and on the Reaction of Cobalt Hydrocarbonyl with 1-Pentene..... Y. Takegami, Y. Watanabe, H. Masada and T. Mitsudo 206
Photolysis of Nitrosobenzene ..... R. Tanikaga 210
Some Observations on Photolysis of Fused Cyclopentyl Nitrites..... H. Suginome, N. Sato and T. Masamune 215
The Cyclization of Benzoylacetonitrile and Ketones by Ammonium Acetate..... A. Sakurai and H. Midorikawa 220
Syntheses and Reactions of *N*-(Phenylpyruvoyl)amino Acids..... Y. Chigira, M. Masaki and M. Ohta 224
Reaction of *N*-(α-Acetoxycinnamoyl)-*N*-hydroxy Derivatives DL-Alanine Esters. Formation of Imidazolidinone and Its Transformations into Pyrrolidinedione and Oxazolidinone..... Y. Chigira, M. Masaki and M. Ohta 228
The Synthesis of 3-Hydroxy-8,9-dimethoxypterocarpan ..... K. Fukui, M. Nakayama and T. Harano 233

Notes:

Asymmetric Hydrogenation of C=O Double Bond with Modified Raney Nickel. XI ..... Y. Izumi, M. Imaida, T. Harada, T. Tanabe, S. Yajima and T. Ninomiya 241
Interaction between Aldehyde and Tris(trimethylsiloxy)aluminum..... T. Saegusa, T. Ueshima and S. Kitagawa 248
Reaction of Tetraethyl α-Phosphonodicarboxylates with Carbonyl Compounds..... K. Sato, M. Hirayama, T. Inoue and S. Kikuchi 250
Studies of Heteroaromaticity. XX. Novel Thermal 1,3-Dipolar Cycloaddition of 5-Nitrofuran-2-carbohydroxamoyl Chloride with Diketone and Dicyclohexylcarbodiimide ..... T. Sasaki and T. Yoshioka 258

Short Communications

π Complexes of Vinyl Alcohol and Propenyl Alcohol with Platinum(II) ..... Y. Wakatsuki, S. Nozakura and S. Murahashi 273
The Syntheses of Bisdithiobenzoylacetonates and Its Halogeno Derivatives from Dithiolium Salt ..... Y. Takahashi, M. Nakatani and A. Ouchi 274
New Five-Coordinate Iridium Complexes..H. Yamazaki, M. Takesada and N. Hagihara 275
Radiative and Radiationless Processes in Phthalazine..... H. Baba, I. Yamazaki and T. Takemura 276
The Isolation of Two Isomers of Bis(L-aspartato)cobaltate(III) ..... K. Hosaka, H. Nishikawa and M. Shibata 277
A Novel Method for the Preparation of *p*-Methoxybenzyloxycarbonyl Amino Acids..... S. Sōfuku, M. Mizumura and A. Hagitani 278

No. 2

General and Physical

Concentration Polarization Phenomena in Ion-exchange Membrane Electrodialysis. I. Studies of the Diffusion Boundary Layer by Means of Six Different Measurements..... T. Sata, R. Yamane and Y. Mizutani 279
Shock Induced Reactions of Methane with Nitrous and Nitric Oxides ....L. J. Drummond 285
Effect of Ultrasonic Waves on Eriochrome Black T .....S. Prakash and S. K. Jain 289
Effect of Cationic Detergents on the Lecithin Stabilized O/W Emulsion..... T. G. Sastry and S. N. Srivastava 291
Kinetics and Mechanism of the Oxidation of Citric and Glyoxylic Acids by Cerium(IV) Ion ..... K. K. Sengupta 298

The Structure Theory of Water. I. Two State Theory.....K. Arakawa and K. Sasaki 303
Anomalous Viscosity of Bitumen Solution and the Agglomeration of "Molecules" .....
..... K. Inouye, J. Tatsuta and T. Sakabe 308
The Catalytic Activity of Onium Compounds in the Homogeneous Liquid Phase Oxidation of Cumene and α-Pinene .....K. Fukui, K. Ohkubo and T. Yamabe 312
The pNa Study of Sodium Alkyl Sulfates in Aqueous Solutions.....
..... I. Satake, T. Tahara and R. Matuura 319
Formulas for One- and Two-center Moment Integrals between Slater Type *s*,*p*-Orbitals with Integer Effective Principal Quantum Numbers of 1 to 5.....
..... M. Suzuki, Y. Nihei and H. Kamada 323
The Efficiencies of Hydrocarbons and Hydrogen in Quenching Triplet Cadmium Atoms....
..... S. Tsunashima, S. Satoh and S. Sato 329
An X-Ray Determination of the Structure of Chamaecynenol.....
..... H. Shimanouchi and Y. Sasada 334
Decomposition of Ammonia and Reactivity of Nitrogen Absorbed on Molybdenum.....
.....S. Tsuchiya and A. Ozaki 344
An MO-Theoretical Study of Several Bimolecular Reactions of Nucleophilic Reagents .....
..... K. Fukui, H. Hao and H. Fujimoto 348
Mechanism of Intramolecular Energy Transfer in Rare Earth Chelates as Revealed by Infrared Absorption Measurements .....Y. Matsuda, S. Makishima and S. Shionoya 356
Some Remarks on the Fragmentation of Excited Ions in the Radiolysis of Hydrocarbons.....
..... T. Miyazaki, K. Tanno and S. Shida 362
Electrical Conduction of TCNQ Ion Radical Salts under High Pressure.....
..... I. Shirotani, T. Kajiwara, H. Inokuchi and S. Akimoto 366
The Formation of Transient Aromatic Ions in Solutions by the Flash Illumination.....
..... K. Kawai, N. Yamamoto and H. Tsubomura 369
Optical and Acoustic Branches and Frequency Distribution of Polyethylene Glycol Chain.....
..... H. Matsuura and T. Miyazawa 372
Structure of Vinylacetylene Determined by Electron Diffraction and Spectroscopy.....
.....T. Fukuyama, K. Kuchitsu and Y. Morino 379

Notes:

The Crystal Structure of Tetraallyldichromium, $Cr_2(C_3H_5)_4$.....
..... T. Aoki, A. Furusaki, Y. Tomiie, K. Ono and K. Tanaka 545
A Correlation between the Magnetic and Optical Properties of Some Cation Radical Salts....
.....Y. Sato, M. Kinoshita, M. Sano and H. Akamatu 548
Studies on the Coagulation of Silver Sol: Effect of Dialysis, Non-electrolytes and Ageing on the Constants of Bhattacharya's Equation .....M. Singh and O. P. Bansal 551
Stochastic Model for Langmuir Isotherm .....K. Ishida 563
Stochastic Model for Autocatalytic Reaction .....K. Ishida 564
Infrared Spectra and Molecular Conformations of Poly-γ-methyl-DL-glutamate .....
..... Y. Masuda and T. Miyazawa 570
Gel Filtration of Mixtures of Surfactants on Sephadex. II. Estimation of Micellar Molecular Weights of Mixed Surfactants .....F. Tokiwa, K. Ohki and I. Kokubo 575
Magnetic Moments of Copper(II) Diethyldithiocarbamate and Related Compounds.....
.....K. Hara, W. Mori, M. Inoue, M. Kishita and M. Kubo 576

Analytical and Inorganic

Gravimetric Determination of Palladium, Silver, Mercury and Copper with 2-Mercaptomethylbenzimidazole .....B. C. Bera and M. M. Chakrabartty 383
The Yields of Photonuclear Reactions in Titanium and Vanadium with Bremsstrahlung up to 60 MeV .....Y. Oka, T. Kato and N. Sato 387
Polarographic Study of Copper(II)-*N*-(2-Hydroxyethyl)ethylenediamine-*N*,*N*′,*N*′-triacetate and -2,2′-Ethylenedioxybis[ethyliminodi(acetate)]Chelates ....M. Kodama and Y. Tominaga 394

The 1 : 1 Complexes of Pyridine-2-carboxamide with Bivalent Metals ..... M. Sekizaki, M. Tanase and K. Yamasaki 399
The Effect of Acetate Ion on the Rate of the Reaction between Cobalt(II) and Manganese(II)-Ethylenediaminetetraacetate Complexes ..... M. Kimura 404
The Effect of Phthalate Ion and Acetate Ion on the Rate of the Reaction between Nickel(II) and Cobalt(II)-Nitrilotriacetate Complexes ..... M. Kimura 407
Stability Constants of Some Uranyl Complexes. II.... S. Ramamoorthy and M. Santappa 411
Magnetic Moments and d-d Bands of Copper(II) Halide Complexes with Substituted Pyridine *N*-Oxides and Some Related Ligands ..... Y. Muto, M. Kato, H. B. Jonassen and L. C. Cusachs 417
Studies of Actinium(III) in Various Solution. II. Distribution Behavior of Lanthanum(III) and Actinium(III) in Some Chelate Extraction Systems ..... T. Sekine, Y. Koike and Y. Hasegawa 432
Chemical Effects Associated with β-Decay Process. III. The Chemical Behavior of ^{144}Pr Decayed from ^{144}Ce(III)-EDTA Complexes in the Solid Phase ..... T. Shiokawa, H. Kudo and T. Omori 436
Long-term Integration of Polarographic Currents and Its Analytical Application ..... K. Matsuda and R. Tamamushi 439
π-Allylic Coordination of Ethyl Acetoacetate to Palladium(II) ..... Y. Tezuka, T. Ogura and S. Kawaguchi 443
Association Involving Optically Active Ions. II. Association Constants of Tris(ethylenediamine)-cobalt(III) and Tris(propylenediamine)cobalt(III) Ions with Some Anions.... K. Ogino 447
The Stability of Fused Rings in Metal Chelates. IV. Preparation and Relative Stability of Copper(II) Complexes with Tetradentate Schiff Base Ligands ..... Y. Nakao, N. Nonagase and A. Nakahara 452
The Spectrophotometric Determination of Thorium(IV) with Bromopyrogallol Red ..... K. Tonosaki and T. Sakai 456
Two-dimensional Dual-band Thin-layer Chromatographic Separation of Polynuclear Hydrocarbons ..... H. Matsushita and Y. Suzuki 460

Notes:

Gas Chromatographic Determination of Nitrogen in Metals by Means of Inert Gas Fusion Using Silicon ..... J. Kashima and T. Yamazaki 542
Zirconium Ethoxide: A New Method of Preparation ..... S. K. Anand, J. J. Singh, R. K. Multani and B. D. Jain 554
Spectrophotometric Determination of a Trace Amount of Cobalt(II) in Nickel(II) Solution ..... M. Kodama 555
The Stability of Fused Rings in Metal Chelates. V. Copper(II) Chelates of the Schiff Base Derived from Pyruvic Acid and *n*-Propanolamine.... A. Nakahara, I. Miyachi and T. Kohno 573

Organic and Biological

Effects of the Addition of Chlorohydrocarbons on the Oxidation of Propylene; A Consideration of the Negative Temperature Coefficient.. M. Masai, E. Echigoya and K. Morikawa 464
The Reaction of Alcohols and Hydrocarbons in a Silent Electric Discharge. I. The Decomposition of 2-Propanol by the Discharge ..... T. Hiraki 470
The Configuration of 6,8(9)-*p*-Menthadien-2,4-diols and *p*-Menthane-2,4-diols.... Y. Sakuda 475
The Synthesis of Poly-L-arginine Hydrobromide and Copolymers of L-Arginine and Other Amino Acids ..... T. Hayakawa, Y. Kondo, H. Yamamoto and Y. Murakami 479
Intramolecular Hydrogen Bonds. XIII. The Preferable Conformation of α-Hydroxy-carboxylic and α-Hydroxybenzoic Acids ..... N. Mori, Y. Asano, T. Irie and Y. Tsuzuki 482
Intramolecular Hydrogen Bonds. XIV. Correlation of the Hydroxyl and the Carbonyl Frequencies of Methyl Salicylates with Hammett's Substituent Constants ..... N. Mori, Y. Asano and Y. Tsuzuki 488
Ethylidenation of L-Sorbose ..... T. Maeda, M. Kiyokawa and K. Tokuyama 492

Hydrogenation and Hydrogenolysis. XI. The Hydrogenation of Methoxy- and Ethoxyanilines with a Ruthenium Catalyst ..... S. Nishimura and H. Yoshino 499
Synthesis of 1- and 2-Piperidinophenazine Derivatives ..... H. Endo, M. Tada and K. Katagiri 502
Synthesis of 1- and 2-Morpholinophenazine Derivatives ..... H. Endo, M. Tada and K. Katagiri 506
Syntheses and Reactions of Functional Polymers. XL. Enhanced Reactivity of Poly(vinyl chloride)by Neighboring-Group Participation of the *N,N*-Disubstituted Dithiocarbamate Function ..... T. Nakai, H. Kawaoka and M. Okawara 508
The Cooxidation of Hydrocarbons in the Liquid Phase. V. Determination of the Reactivity Ratios ..... E. Niki, Y. Kamiya and N. Ohta 512
The Synthesis of Regular Copolymers of Glycine and Alanine ..... S. Takahashi 521
Organic Syntheses by Means of Metal Complexes. II. Oxo Reaction Catalyzed by Cyclopentadienyliron Dicarbonyl Dimer ..... J. Tsuji and Y. Mori 527
Studies of Aminosugars. XXI. The Total Synthesis of Kanamycin C ..... S. Umezawa, S. Koto, K. Tatsuta and T. Tsumura 529
Studies of Aminosugars. XXII. The Total Synthesis of Kanamycin A ..... S. Umezawa, K. Tatsuta and S. Koto 533
Studies of Aminosugars. XXIII. The Total Synthesis of Kanamycin B ..... S. Umezawa, S. Koto, K. Tatsuta, H. Hineno, Y. Nishimura and T. Tsumura 537

Notes:

Preparation of 2-Alkenonitrile by Means of the Pyrolysis of Diethyl 1-Cyanoalkyl Phosphate ..... Y. Okamoto, T. Nitta and H. Sakurai 543
The Formation of 1,4-Disubstituted Piperazines from 1-Substituted Aziridines ..... I. Okada, N. Itoh and R. Sudo 547
Studies on Heteroaromaticity. XXIX. Synthesis and Reactions of 1-(5-Nitro-2-furoyl)aziridine Oxime ..... T. Sasaki and T. Yoshioka 556
Studies on Reactions of Isoprenoids. V. 1,3-Dipolar Cycloaddition Adducts of Myrcene with Benzonitrile Oxide ..... T. Sasaki, S. Eguchi and T. Ishii 558
The Photo-Fries Rearrangement of Hydroxyphenyl Cinnamates ..... H. Obara, H. Takahashi and H. Hirano 560
The Preparation of Copper(I) Complex Containing Organic Halide ..... K. Wada and H. Hashimoto 562
Preparation of Carboxymethylthiophenazines ..... H. Endo, M. Tada and K. Katagiri 566
Protonation of Allene. Evidence for the Formation of 1,1-Diphenyl-3,3-dibromoprop-1-ene ..... F. Toda, M. Higashi and K. Akagi 567
Synthesis of Pipataline ..... Y. Omote, H. Tazawa, Y. Fujinuma and N. Sugiyama 569
The Cobalt Carbonyl-catalyzed Hydroesterification of Methyl Acrylate with Carbon Monoxide and Methanol ..... A. Matsuda 571

Short Communications

Studies on Phôto-polarography. IV. Solvent Effect on Photocurrents ..... H. Imai and Yamashita 578
A Thiocyanato Cobalt(III) Complex: $[Co(SCN)_2dip_2]ClO_4 \cdot 2H_2O$ ..... N. Maki and S. Sakuraba 579
Reversible Oxygenation of Cobalt(II) Complexes on Polyvinylpyridine ..... A. Misono, S. Koda and Y. Uchida 580
Photoreaction of 3,4-Diphenyl-1,2,5-oxadiazole ..... T. Mukai, T. Oine and A. Matsubara 581
A New Approach to the Study of the Reactions of Nitrogen Atoms with Hydrocarbons ..... T. Oka and S. Sato 582

No. 3

General and Physical

Study of Wall Effect on the Flow of Polyvinylpyrrolidone Solutions in Capillary ..... T. Watanabe, T. Mineshita and S. Ono 583
The Flow Properties of γ-Polyglutamic Acid Solutions in Capillary..... T. Mineshita, S. Matsumura, H. Ono, T. Watanabe and S. Ono 594
Kinetics and Mechanism of Oxidation of D-Glucose and D-Fructose by Potassium Ferricyanide in the Presence of Ammonia .....K. C. Gupta and M. P. Singh 599
Measurement of Negative Ions Formed by Electron Impact. I. Negative Ion Mass Spectra of Nitroalkanes..... S. Tsuda, A. Yokohata and M. Kawai 607
Measurement of Negative Ions Formed by Electron Impact. II. The Ionization Efficiency Curves of Negative Nitro, Oxygen Atom and Nitromethylene Ions from Nitroalkanes..... .....S. Tsuda, A. Yokohata and M. Kawai 614
Infrared Spectra of Acylureas and *NN'*-Deuterated Acylureas..... T. Uno, K. Machida, K. Hanai and Y. Saito 619
Photochemistry of Acridine and Acridan. Two Isomeric Forms of Acridine Semiquinone..... A. Kira and M. Koizumi 625
Polymerization of *N*-Vinylcarbazole in the Presence of β-Cyanoacrolein ..... H. Sumitomo and I. Takemura 631
Copolymerization of β-Cyanoacrolein with Acrylonitrile ....I. Takemura and H. Sumitomo 634
Electronic Spectra of Crystalline TCNQ Anion Radical Salts. II. Complex Salts ....Y. Iida 637
The Etherification Reactions of Allyl Alcohol Catalyzed by the Copper(I) Chloride Complex .....T. Ogura, N. Furuno and S. Kawaguchi 643
Electron Spin Resonance Study of Radicals Formed by Abstracting Hydrogen from Amides.. ..... T. Yonezawa, I. Noda and T. Kawamura 650
Solvated Electron Formed in Water by the Silent Electric Discharge in Argon Atmosphere ..... A. Yokohata 658
The Microwave Spectrum, Structure, and Dipole Moment of Ethylene Episulfoxide..... S. Saito 663
Detection of Sulfur Monoxide in the Pyrolysis of Ethylene Episulfoxide by Microwave Spectroscopy..... S. Saito 667
The Chage-transfer Bands in the Crystal Spectra of Molecular Compounds of Tetramethylbenzidine and Those of Benzidine ..... T. Amano, H. Kuroda and H. Akamatu 671
Solubility of Ag_2O in Na_2O-B_2O_3 Melts .....T. Maekawa, T. Yokokawa and K. Niwa 677
Electrical Conductance of Molten Salt Systems: Ag_2O-B_2O_3 and Ag_2O-Na_2O-B_2O_3 .... H. Kodama, Y. Kimura, T. Yokokawa and K. Niwa 681
Zeeman Effect of Phosphorescence. II. Intensity Considerations on Pyrazine Phosphorescence ..... T. Azumi, M. Ito and S. Nagakura 685

Note:

The Near Ultraviolet Absorption Spectrum of Quinoxaline Vapor..... ..... Y. Hasegawa, Y. Amako, H. Azumi, M. Ito and Y. Kaizu 840

Analytical and Inorganic

A Spectrophotometric Study of the Uranyl Chelate of 2-(1,8-Dihydroxy-3,6-disulfo-2-naphthylazo)-phenoxyacetic Acid.....Y. Shimoishi 690
Emission Spectrographic Analysis of Metal Solid Samples with Plasma Jet Flame. I. Application of Nitrogen Plasma Flame.....K. Hirokawa and H. Gotô 693
Chemical Effects Associated with β-Decay Process. IV. Kinetic Studies of the Chemical Behavior of ^{144}Pr Decayed from the ^{144}Ce(III)-Diethylenetriaminepentaacetate Complex..... ..... T. Shiokawa and T. Omori 696

Electronic Structure of Tris(1,10-phenanthroline)iron(II) Complex ..... T. Ito, N. Tanaka, I. Hanazaki and S. Nagakura 702
Spectroscopy and Magnetic Properties of Nitrosylpentaamminechromium Salts..... H. Kobayashi, I. Tsujikawa, M. Mori and Y. Yamamoto 709
Geochemical Fractionation of Induced Radionuclides in Fresh Nuclear Debris through the Atmosphere—Np-239 and Co-60 .....T. Sotobayashi, T. Suzuki and S. Koyama 716
Polarographic Study of Thallium(I) Chelates of 2,2-Ethylenedioxybis[ethyliminodi(acetic acid)] and Cyclohexane-1,2-diamine-*N,N,N',N'*-tetraacetic Acid ..... M. Kodama and Y. Tominaga 721
Polarographic Studies of Copper(II) Chelates of Ethylenediamine-*N,N,N',N'*-tetrapropionic Acid and Diethylenetriaminepentaacetic Acid .....M. Kodama and Y. Tominaga 724

Notes:

Kinetics of Multidentate Ligand Substitution Reactions. V. Effects of Ammonia and Thiocyanate Ion on the Substitution Reaction of Eriochrom Black T with Nickel(II)-Ethylenediaminetetraacetate Chelate.....M. Kodama and K. Miyamoto 833
The Complexation Reaction of 1-(Hydroxy-4-methyl-2-phenylazo)-2-naphthol-4-sulfonic Acid (Calmagite) with Divalent Metal Ions and Use as a Metallochromic Indicator..... M. Kodama and K. Miyamoto 835

Organic and Biological

Assymmetric Reactions. II. Anomalous Stereoselectivity of the Grignard Reactions with *N*-Benzyl-2,3-*O*-isopropylidene-D-glyceraldimine ....Y. Ohgo, J. Yoshimura and T. Sato 728
Reaction of Methylsulfinyl Carbanion with Substituted Phthalic Esters..... Y. Otsuji, H. Yabune and E. Imoto 732
Eine Dienon-Phenol-Umlagerung von 5-Oxo-2-methyl-4,4-dibenzyl-3-äthoxycarbonyl-4,5-dihydro-indol..... T. Suehiro und K. Eimura 737
Reactive Fiber. VII. Preparation and Polymerization of Vinyl Sulfonyl(*β*-Chloroethyl) amide.....Y. Iwakura, K. Uno, N. Nakabayashi and W.-Y. Chang 741
Deoxygenation of Styrene Oxide by Zinc Metal and Lewis Acid..... S. Miyano, M. Hida and H. Hashimoto 746
Studies of Purine *N*-Oxides. III. The Synthesis of Purine 3-*N*-Oxides..... H. Kawashima and I. Kumashiro 750
Amination of Benzoic Acid in the *γ*-Radiolysis of Liquid Ammonia .....A. Sakumoto 755
Reaction of *trans*-Stilbene with *n*-Butyllithium in Tetrahydrofuran..... Y. Okamoto, M. Kato and H. Yuki 760
Photo-Aryl Coupling and Related Reactions. II. The Formation of Triphenylenes from Halogeno-*o*-terphenyls .....T. Sato, S. Shimada and K. Hata 766
Photo-Aryl Coupling and Related Reactions. III. The Transannular Dehydrogenation of [2.2] Metacyclophane Induced by Iodine ..... T. Sato, M. Wakabayashi, S. Hayashi and K. Hata 773
Organic Syntheses by Means of Metal Complexes. III. Cobalt Carbonyl-catalyzed Carbonylation of *β*-Propiolactone .....Y. Mori and J. Tsuji 777
Polymerization of Naphthalene and Reactions of Polynaphthalene..... H. Minato, N. Higosaki and C. Isobe 779
Studies of Peptide Antibiotics. XIV. Analogs of Gramicidin S Containing D-Valine or D-Leucine in Place of D-Phenylalanine ..... H. Aoyagi, T. Kato, M. Waki, O. Abe, R. Okawa, S. Makisumi and N. Izumiya 782
The Decomposition of Cyclohexyl Hydroperoxide in the Presence of Cyclohexanone and a Novel Rearrangement Product ..S. Chubachi, H. Matsui, K. Yamamoto and S. Ishimoto 789
Photochemical Ethoxycarbonylmethylation of Benzene with Ethyl Haloacetates..... Y. Ogata, T. Itoh and Y. Izawa 794
Nitroalkenylferrocene. II. The Condensation Reaction of Nitroolefins with Aromatic Carbonyl Compounds .....M. Shiga, H. Kono, I. Motoyama and K. Hata 798

The Wolff Rearrangement. V. Kinetic Isotope Effect of α-Diazoacetophenone ..... Y. YUKAWA and T. IBATA 802
Organic Syntheses by Means of Nobel Metal Compounds. XXXVIII. Cyclohexanone Oxime Complexes of Palladium .....S. IMAMURA, T. KAJIMOTO, Y. KITANO and J. TSUJI 805
t-Amyloxycarbonyl as a New Protecting Group in Peptide Synthesis. V. Direct Synthesis of *t*-Amyloxycarbonyl-and *t*-Butyloxycarbonylamino Acids. I. Using the Respective *t*-Alkyl Chloroformates ..... S. SAKAKIBARA, I. HONDA, K. TAKADA, M. MIYOSHI, T. OHNISHI and K. OKUMURA.. 809
The Structure and the Stereochemistry of Solidagonic Acid..... S. KUSUMOTO, T. OKAZAKI, A. OHSUKA and M. KOTAKE 812

NOTES:

Ultraviolet Spectral Studies in the Esters of Aroylphosphonic Acids..... K. TERAUCHI and H. SAKURAI 821
Laser-induced Chemical Reaction. I. Reaction of Carbon Vapor Produced by a Pulse Ruby Laser..... K. TAKI, P. H. KIM and S. NAMBA 823
Studies of Heteroaromaticity. XXIII. 1,3-Dipolar Cycloaddition Reactions of 5-Nitrofuronitrile Oxide and *m*-Nitrobenzonitrile Oxide with Benzyne.....T. SASAKI and T. YOSHIOKA 826
Organic Syntheses by Means of Metal Complexes. IV. Reduction of Nitrobenzene with Carbon Monoxide.....T. KAJIMOTO and J. TSUJI 827
Metal Acetate- and Alcohol-catalyzed Retropropargyl Rearrangement..... F. TODA, M. HIGASHI and K. AKAGI 829
Reaction of Sulfides with *t*-Butyl Hypochlorite in the Presence of Water, ^{18}O Tracer Study .. K. KIKUKAWA, W. TAGAKI, N. KUNIEDA and S. OAE 831
Radical Copolymerization of Glycidyl Dienecarboxylates with Styrene..... Y. IWAKURA, F. TODA, R. IWATA and Y. TORII 837
Formation of 3-Butenoates from Crotonyl Chloride in the Presence of Amines..... Y. IWAKURA, F. TODA, R. IWATA and Y. TORII 841
Isolation of Aplysin, Debromoaplysin, and Aplysinol from *Laurencia Okamurai* Yamada ..... T. IRIE M. SUZUKI and Y. HAYAKAWA 843

Short Communications

Conformational Dependence of P=O Stretching Vibration Frequency in Six-membered Cyclic Phosphates.....M. KAINOSHO, T. MOROFUSHI and A. NAKAMURA 845
The Electron Spin Resonance of the Trinuclear Vanadyl Pyrophosphate Complex..... A. HASEGAWA, Y. YAMADA and M. MIURA 846
Mass Spectroscopic Detection of Methyl Radical in the Reaction of Hydrogen Atom with Ethylene ..... S. TSUCHIYA, F. ISHIHARA, S. TASHIRO and T. HIKITA 847
A Mechanism of the Syndiotactic Polymerization of α-Olefin..... Y. TAKEGAMI and T. SUZUKI 848
Photocycloaddition of Propionaldehyde to Ethyl Vinyl Ether ....K. SHIMA and H. SAKURAI 849
Intrinsic Viscosity of Rigid Complex Molecules .....K. TSUDA 850
A Possible Role of Diarylmethanes as the Intermediate for the Disproportionation of Methyl Groups in the Jacobsen Reaction .....H. SUZUKI, Y. TAMURA and A. SERA 851
Selective Homogeneous Hydrogenation of 3-Oxo-1,4-diene Steroids with a Ruthenium Complex as Catalyst .....S. NISHIMURA and K. TSUNEDA 852
Delayed Fluorescence of the DNA-Acridine Dye Complexes in a Frozen Aqueous Solution.... .....Y. KUBOTA, Y. FUJISAKI and M. MIURA 853
The Total Synthesis of Dehexyl-deisovaleryloxy-antimycin A_1..... M. KINOSHITA and S. UMEZAWA 854

No. 4

General and Physical

Chemiluminescent Reaction between Polyphenols and Ozone in Acetic Acid ..... R. Iwaki and I. Kamiya 855
A Study on Electron Spin Resonance of the Complex between Metal Ions of Group II and *o*-Quinone Anion ..... K. Kuwata and Y. Shimizu 864
Effect of Potassium Promoter on Iron Oxide Catalysts for Dehydrogenation of Ethylbenzene to Styrene ..... K. Shibata and T. Kiyoura 871
Extraction of Hydrochloric Acid by Tris-*n*-octylamine in Benzene ..... T. Kojima, H. Fukutomi and H. Kakihana 875
The Crystal and Molecular Structure of Bis-(*N*,*N*′-π-cyclopentadienylcobalt)-di-*tret*-butyl Urea, (π-$C_5H_5Co)_2$(*N*-*t*-$C_4H_9)_2CO$ ..... Y. Matsuura, N. Yasuoka, T. Ueki, N. Kasai and M. Kakudo 881
K-Band Electron Paramagnetic Resonance of Sulfur Monoxide in the Gaseous Phase ..... H. Uehara 886
Basicity of Dimethyl Sulfoxide in an Aqueous Solution as Measured by the Spectrophotometric Indicator Method ..... G. Wada 890
Fragmentation of the Excited Isobutane Ion Produced by Charge Transfer from the Nitrogen Molecule Ion ..... T. Miyazaki, T. Kohama, K. Fueki and Z. Kuri 894
Infrared Spectra of Partially Deuterated Acetamide ..... T. Uno, K. Machida and Y. Saito 897
Some Experiments on the Triplet State Mechanism of the Spectral Sensitization of Poly(vinyl cinnamate) and Its Application for Searching New Sensitizers ..... M. Tsuda 905
Photochemistry of Acetanilide. IV. The Photochemical Reactions in the Vapor Phase and Rigid Matrixes ..... H. Shizuka and I. Tanaka 909
Solubility of Chlorine in Mixed Solutions of HCl and $CuCl_2$ ..... F. Hine and S. Inuta 914
Fluorescence Lifetime of Acridine in Water-Organic Solvent Mixtures ..... H. Kokubun 919
Semi-Empirical ASMO SCF Method for the Valence Electron System. The Electronic Structures of Protonated Pyridinium and Diazinium Cations ..... H. Katô, H. Kato, H. Konishi and T. Yonezawa 923
The Photoconductivity of the Titanium Dioxide Crystal ..... T. Iida and H. Nozaki 929
The Electronic Structures of Unstable Intermediates. Benzyne and Hetarynes ..... T. Yonezawa, H. Konishi and H. Kato 933
Heat of Immersion of Titanium Dioxide in Water. I. The Effect of the Hydration Treatment of Titanium Dioxide ..... T. Morimoto, M. Nagao and T. Omori 943

Notes:

Surface Potential Study of Stearic Acid Monolayer on Mercury ..... T. Yamashita, T. Nagai and K. Hirota 1145
Dipole Moments of 1,2-Dihalogeno- and 1,1,2,2-Tetrahalogenoethanes in Aromatic and Non-Aromatic Solvents ..... O. Kiyohara and K. Higasi 1158

Analytical and Inorganic

The Chromium(III) Complexes with Anthranilicdiacetic Acid ..... T. Tomita, E. Kyuno and R. Tsuchiya 947
Volumetric Determination of the Iodide Ion with Mercury(II) Ethylenediaminetetraacetate Using Mercury(II)-Methylthymolblue as an Indicator ..... T. Nomura 952
Determination of a Small Amount of Iodide by Atomic Absorption Spectrophotometry Using a Cadmium Hollow Cathode Lamp ..... T. Kumamaru 956
Some Thermal Properties of Metal Chelates of *o*-Acylphenols and of Their Ketimine Derivatives ..... S. Matsumoto, H. Kobayashi and K. Ueno 960

Spectrophotometric Studies of Ethyl Xanthate Complexes in Aqueous Solutions ..... M. Nanjo and T. Yamasaki 968
Acid Decomposition of Metal Xanthate Complexes and Their Stability Constants ..... M. Nanjo and T. Yamasaki 972
The Synergistic Effect in Solvent Extraction. The Effect of Carboxylic Acid on the Solvent Extraction of Europium(III) with Benzoyltrifluoroacetone..... T. Shigematsu, M. Tabushi, M. Matsui and T. Honjyo 976
The Yields of Photonuclear Reactions Leading to the Production of Beryllium-7 with Bremsstrahlung up to 60 MeV .....Y. Oka, T. Kato and A. Yamadera 981
Cobalt(IV) Ammine Complexes with 5-Nitrosalicylato or Similar Ligands. II. Preparation and Properties of Derivatives..... .....Y. Yamamoto, M. Mori, H. Yoneda, S. Misumi and the Late K. Ito 984
Circular Dichroism of Chromium(III) Complexes. I. L-Tartrato Complexes. Their Stereospecific Formation and Spin-forbidden Absorption Bands ....S. Kaizaki, J. Hidaka and Y. Shimura 988
The Synergistic Effect in Solvent Extraction. The Effect of the Chelating Ligands on the Stability Constant of Lutetium β-Diketonate Adducts with TOPO.....T. Honjyo 995
Cobalt(IV) Ammine Complexes with 5-Nitrosalicylato or Similar Ligands. III. Electric Resistivity, Magnetic Susceptibility, and ESR .....Y. Yamamoto 999
Studies of the Interaction between the Hexyl Anion and Alkali Metal Ions ..... S. Motomizu, K. Tôei and T. Iwachido 1006
The Spectrophotometric Determination of Palladium with Chromazurol S .....R. Ishida 1011
The Crystal Structure of (—)D-Tris(trimethylenediamine)cobalt(III) Bromide Monohydrate .. .. T. Nomura, F. Marumo and Y. Saito 1016
Polarographic Behavior of Tris(2,2′-bipyridine)chromium(III) and Tris(ethylenediamine)chromium(III) in Acetonitrile Solutions .....Y. Sato and N. Tanaka 1021
On the Viscosity of Liquid Selenium .....S. Hamada, N. Yoshida and T. Shirai 1025

Notes:

Studies on Photo-polarography. II. Photo-polarographic Behavior of Dissolved Oxygen under Ultraviolet Irradiation .....H. Imai and K. Yamashita 1142
Preparation of Pentacyanotriphenylphosphine- and Tetracyanobis(triphenylphosphine)cobaltate(III)..... K. Watanabe, H. Nishikawa and M. Shibata 1150

Organic and Biological

Bipolar Ion-Exchange Membranes Prepared from Blends of Graft Copolymers .... H. Kawabe and M. Yanagita 1029
Solvent Effects on ρ Values of the Hammett Equation .... Y. Kondo, T. Matsui and N. Tokura 1037
The Anodic Reaction of Acetic Acid in the Presence of Enanthaldehyde, Enanthaldehyde Diethyl Acetal, and 2-Octanone.....A. Takeda, S. Wada, S. Torii and Y. Matsui 1047
The Rotatory Dispersion and Stereochemistry of Orgnic Compounds. XV. Nitrophenyl Glycosides..... Y. Tsuzuki, M. Koyama, K. Aoki, T. Kato and K. Tanabe 1052
The Insertion Reaction of Propylene into Metal-Ethyl Bonds in the Ziegler-Natta Catalyst.... ..... Y. Takegami, T. Suzuki and T. Okazaki 1060
The Ionic Telomerization of Diene Compounds. IV. The Cationic Telomerization of Butadiene with Its Hydrobromides .....T. Asahara and H. Kise 1065
Catalysis in Peptide Synthesis with Active Esters. I. Bifunctional Catalysis in the Aminolysis of Benzyloxycarbonyl-L-phenylalanine p-Nitrophenyl Ester in Dioxane .....N. Nakamizo 1071
Catalysis in Peptide Synthesis with Active Esters. II. Effects of Concentrated Carboxylic Acids on the Aminolysis of Benzyloxycarbonyl-phenylalanine p-Nitrophenyl Ester in Dioxane ..... N. Nakamizo 1078
The Synthesis of Methylacetylene by the Pyrolysis of Propylene. IV. The Pyrolysis of Allyl Chloride ..... S. Kunichika, Y. Sakakibara and M. Taniuchi 1082

Oxygen Exchange Reaction of Sulfoxides in Dinitrogen Tetroxide ..... N. Kunieda, K. Sakai and S. Oae 1090
A Study of the Solvent Effect on the Polymerization of *N*-Phenylethyleneimine..... T. Kagiya, T. Kondo, K. Nakao and K. Fukui 1094
Photochemistry of β-Acylacrylic Acids and Their Esters ..... N. Sugiyama, H. Kataoka, C. Kashima and K. Yamada 1098
Syntheses and Reactions of Functional Polymers. XLV. Synthesis and Properties of Poly(*N*-glycidyl-2-oxazolidone) .....T. Endo, R. Numazawa and M. Okawara 1101
The Reaction between Hydrocarbon and Hydrogen Cyanide in Silent Electrical Discharge. III. The Reaction of Ethylene or Propylene with Hydrogen Cyanide. .....K. Kawamoto and Y. Nishimura 1105
The α Effect. Aminolysis on a Saturated Carbon Atom ..... S. Oae, Y. Kadoma and Y. Yano 1110
Spectrophotometric Studies of the Copolymer of L-Tryptophan L-Glutamic Acid in an Aqueous Solution..... A. Ohnishi, K. Hayashi and J. Noguchi 1113
Alkoxysilanes. II. Preparation of Tributoxysiloxychlorosilanes, Silanols, and Their Polymeric Substances.....Y. Abe and I. Kijima 1118
Synthesis of Carboxylic Acid from Aryl Halide and Carbon Monoxide Catalyzed by Nickel Carbonyl.....M. Nakayama and T. Mizoroki 1124

Notes:

Two-stage Polymerization of (1,3-Dioxolan-4-yl)methyl Acrylate. ..... H. Minato and N. Muramatsu 1146
Alkoxysilanes. I. Preparation of Alkoxysiloxy Derivatives of Antimony ..... Y. Abe and I. Kijima 1148
The Reaction of 3-Chloro-benzo-[*d*]isothiazole with Thiophenols .....S. Watanabe 1152
Photoreaction of Pseudoionone ..... N. Sugiyama, Y. Sato, M. Yoshioka, K. Yamada and H. Kataoka 1153
The Addition Reactions of Fluoroalkyl Ethyl Ethers to Perfluoropropene ..... H. Muramatsu, H. Kimoto and K. Inukai 1155

Applied

Amino-quinoid Polymeric System. The Preparation of a Polyester Containing 2,5-Diamino-*p*-benzoquinone Nuclei and Its Crosslinking..... .....J. Kumanotani, K. Sugita, S. Kazama and T. Yoshikawa 1130
Electroless Nickel Plating from Acid-acetate Baths Containing Hypophosphite as a Reducing Agent .....K. Ogawa 1135

Short Communications

Ethylene Proton Exchange in Cobalt(III) EDTA Complex as Evidenced by Nuclear Magnetic Resonance..... H. Yoneda and Y. Morimoto 1160
The Adsorbed State of Oxygen on Vanadium Pentoxide Catalyst ..... K. Tarama, S. Yoshida, S. Ishida and Y. Doi 1161
The Reactions of Aroyl Peroxides with Grignard Reagents. I. On the Formation of a Stable Complex Containing Peroxide .....M. Ōkubo, K. Maruyama and J. Ōsugi 1162
[7](2,6)Pyridinophane and [7](2,6)Pyrylophanium Perchlorate..... .....H. Nozaki, S. Fujita and T. Mori 1163
Radical Formation in the Radiolysis of Solid Isobutane as Studied by ESR Spectroscopy..... .....T. Wakayama, T. Miyazaki, K. Fueki and Z. Kuri 1164

No. 5

General and Physical

The Surface Structure of Silica Gel Studied by Dielectric Dispersion ..... S. Kondo and M. Muroya 1165
Mechanism of Emulsification with Special Reference to Solid Stabilized Emulsions..... S. P. Jain and S. N. Srivastava 1171
Studies in Nuclear Magnetic Resonance Spectroscopy. Lang-range Shielding by Triple Bonds ..... J. M. Jackman and G. Y. Sarkis 1179
Molecular Orbital Treatment of Nitric Oxide Radicals. II. ESR Spectra of Aliphatic Nitric Oxide Radicals..... O. Kikuchi 1187
Decomposition of Formic Acid on Silver Catalyst—Adsorption Measurement during Surface Catalysis..... K. Fukuda, T. Onishi and K. Tamaru 1192
Spectroscopic Studies on Radicals Produced from Acridine and Acridan in γ-Irradiated Rigid Solutions at -196°C ..... T. Shida and A. Kira 1197
The Micellar Properties of Disodium Monoalkyl Phosphates in Aqueous Solutions ..... T. Tahara, I. Satake and R. Matuura 1201
The Effects of Organic Additives on the Solubilities and CMC's of Potassium Alkyl Sulfates in Water. I. The Effects of Several Hydroxy Compounds ..... K. Shirahama, M. Hayashi and R. Matuura 1206
Paramagnetic Susceptibilities of Some DPPH Derivatives....N. Ohigashi and H. Inokuchi 1212
Electrophoretic Behavior of Micelles of a Polyether-sulfate Type Surfactant..... F. Tokiwa and K. Ohki 1216
Exo-electron Emission from Sandblasted Steel.....Y. Tamai and Y. Momose 1219
Determination of the S*–T Transition Probabilities of Some Xanthene and Thiazine Dyes on the Basis of the T-Energy Transfer. I. Experiment in Ethanol Solutions ..... M. Nemoto, H. Kokubun and M. Koizumi 1223
Reactions of Singlet Oxygen and Half-reduced Oxygen which are Produced Simultaneously by the Interaction of Triplet Dye and Oxygen....Y. Usui, C. Iwanaga and M. Koizumi 1231
The Crystal and Molecular Structure of *N*-(*p*-Bromophenyl)-α-D-ribopyranosylamine 2,4-Phenylboronate .....H. Shimanouchi, N. Saito and Y. Sasada 1239
A Theoretical Interpretation of Substituent Effects on the H–H and ^{13}C–H Spin Coupling Constants for CH_3X, $(CH_2)_2X$, and CH_2–CHX Derivatives ..... T. Yonezawa, I. Morishima, M. Fujii and H. Kato 1248
An MO-Theoretical Study of the E2 Reaction of Ethyl Chloride ..... H. Hao, H. Fujimoto and K. Fukui 1256
Microwave Spectrum of Cyclohexene .....T. Ogata and K. Kozima 1263
On the Order of Isotopic Exchange Reactions.....T. Takaishi 1266
Thermodynamic Properties and Phase Transitions of Thallous Cyanide Crystal .....T. Matsuo, M. Sugisaki, H. Suga and S. Seki 1271

Notes:

Fluorescence Spectra of Some Benzimidazoles in Acid Media ..M. Kondo and H. Kuwano 1433
A Band Model of the Charge-Transfer Complexes .....H. Sato and C. Okazaki 1439
The Nuclear Magnetic Resonance and Infrared Spectra of Aromatic Azomethines ..... K. Tabei and E. Saitou 1440
Liquid-phase Selective Hydrogenation of an Aliphatic α,β-Unsaturated Aldehyde over Raney Cobalt Catalyst Modified with Ferrous Chloride .....K. Hotta and T. Kubomatsu 1447

Analytical and Inorganic

Gas Chromatography of Rare Earth Chelates of Pivaloyltrifluoroacetone .....T. Shigematsu, M. Matsui and K. Utsunomiya 1278
Coulometric Titration of a Microamount of Water after Conversion to Ammonia ..... T. Yoshimori and S. Ishiwari 1282

Absorption Spectra and Circular Dichroisms of Metal Complexes. III. *trans*-Dihalogeno-bis-*l*-propylenediamine Complexes of Cobalt(III), Rhodium(III), Palladium(IV) and Platinum-(IV) ..... H. Ito, J. Fujita and K. Saito 1286
The Separation of Hexacyanoferrate(II) and Hexacyanoferrate(III) Ions by Reversed-phase Partition Chromatography ..... I. Akaza, T. Kiba and M. Taba 1291
Reactions of Metal Chelates. III. The Reactions of Bis(salicylaldehydato)copper(II) with Amides and Esters of Glycine and Glycylglycine ..... K. Hamada, H. Ueda, Y. Nakao and A. Nakahara 1297
The Mixed Chromium(III) Complexes Containing Acetylacetone and the Halogenations Thereof ..... Y. Fujii, E. Kyuno and R. Tsuchiya 1301
Crystal Growth of the Phosphate Coating on Iron and Steel ..... T. Umegaki, T. Okabe and K. Omori 1304

Notes:

Some Observations of the Water Activity in Uni-uni Valent Electrolyte Solutions..... Y. Hasegawa 1429
The Synthesis and the Properties of Some New Boroarsenites ..... N. P. Singh 1431
Hot-Atom Chemistry of Bromine. I. Distribution of Bromine-82 Recoiled by the Bromine-82m Isomeric Transition Process in Aqueous Potassium Bromate ..... C. Shinomiya, A. Oyoshi and T. Kishikawa 1437
The Cerimetric Determination of Hypophosphite after Oxidation with Iron(III) ..... K. Ogawa 1449
Effect of the Deuterium Atom Fraction on the Stability Constant of the Main Hydrolysis Product of the Beryllium Ion ..... H. Kakihana and M. Maeda 1458

Organic and Biological

Synthesis of Vitamin B_{12} Model Compounds ..... T. Sasaki and F. Matsunaga 1308
A Mechanistic Approach to the Electrolytic Reductive Dimerization of Acrylonitrile ..... T. Asahara, M. Senō and T. Arai 1316
Studies of Acetothiolacetate..... S. Motoki and T. Sato 1322
Kinetic Studies of Oxygen Exchange and Racemization Reactions of Diaryl Sulfoxides in Sulfuric Acid of Various Concentrations ..... N. Kunieda and S. Oae 1324
Reaction of Salicylamine with α-Dicarbonyl Compounds. I. Transamination Reaction..... H. Kanatomi and I. Murase 1329
The Structure of Copolymers of L-Proline with γ-Benzyl-L-glutamate in Organic Solvents .... R. Sakai, S. Ikeda and T. Isemura 1332
The Structure of Copolymers of L-Proline with L-Glutamic Acid in Aqueous Solutions ..... R. Sakai and T. Isemura 1337
Graft Copolymerization onto Cellulose in Dimethyl Sulfoxide by Means of a Ceric Salt Containing Lauryl Sulfuric Ions..... K. Kaeriyama 1342
Studies of the Derivatives of Epichlorohydrin. III. A New Method of Preparing γ-Alkoxy-γ-butyrolactones ..... T. Kuwamura and H. Takahashi 1345
Spiro Compound Formation. III. The Formation of Spiro Compounds by the Rearrangement of Bicyclo[5.4.0]undecene(1,7) and Cyclopentylcyclohexene ..... M. Nojima and N. Tokura 1351
The Photoreaction of β-Benzoylacrylic Acid. ..... N. Sugiyama, H. Kataoka, C. Kashima and K. Yamada 1353
A Novel Method for the Synthesis of 1-Phenyl-2,3-dihydro-4-pyridones ..... N. Sugiyama, M. Yamamoto and C. Kashima 1357
Synthesis and Physical Properties of Long Chain Compounds. X. Studies on the X-Ray Diffraction Patterns of Normal Higher Primary Amines ..... A. Watanabe, A. Ishizawa, M. Kosaka and R. Gotō 1360
Effects of Substituents on the Chain-transfer Reactivities of Nuclear-substituted Benzaldehydes to Polymer Radicals ..... T. Yamamoto, M. Hasegawa and T. Otsu 1364

An Improved Synthesis of *N*,*β*-Dimethylleucine and the Resolution Thereof ..... H. KOTAKE, T. SAITO and K. ŌKUBO 1367
Studies on Telomerization of Vinyl Chloride with Carbon Tetrabromide ..... T. ASAHARA and M. C. CHOU 1373
Photooxidation of Anthracene ..... N. SUGIYAMA, M. IWATA, M. YOSHIOKA, K. YAMADA and H. AOYAMA 1377
Reaction of Acyl Oxime with Mercaptan .....R. SUDO, A. KANEDA and N. FURUOYA 1380
Oligomerization of Isoprene by Hafnium Catalysts ....A. MISONO, Y. UCHIDA, K. FURUHATA and S. YOSHIDA 1383
Specific Association of Riboflavin and Adenine Derivatives in Chloroform Solution and the Effect of Barbiturates on the Association.....Y. KYOGOKU and B. S. YU 1387
Solvent Effect in a Partial Asymmetric Synthesis. II. ..... S. INAMASU, M. HORIIKE and Y. INOUYE 1393
Synthetic Studies of the Flavone Derivatives. X. The Synthesis of 3,4′,5-Trihydroxy-3′,6,7-trimethoxyflavone and the Structures of Chrysosplenin and Chrysosplenetin. ....K. FUKUI, T. MATSUMOTO and S. TANAKA 1398
Reaction of Vetivazulene with Sulfur. 3,5,9-Trimethylazuleno[1,2-*b*]thiophene ..... S. HAYASHI, S. KUROKAWA and T. MATSUURA 1404
Syntheses of Pterocarpans. II. The Synthesis of (±)-Pterocarpin ..... K. FUKUI and M. NAKAYAMA 1408
A Cationic Polymerization of Formaldehyde in Liquid Carbon Dioxide. V. Reaction Mechanism..... H. YOKOTA, M. KONDO, T. KAGIYA and K. FUKUI 1412

NOTES:

The Synthetic Intermediate of Pyridoxine. I. A Novel Synthesis of 5-Alkoxy-2-carboxy-4-methyloxazole .....I. MAEDA, M. TAKEHARA, K. TOGO, S. ASAI and R. YOSHIDA 1435
Studies on 6-Bromo-2-mercapto-3-substituted 4-(3*H*)-Quinazolinones ..... P. N. BHARGAVA and R. LAKHAN 1444
Catalytic Hydrogenation of 1,3-Diphenylpropane-1,2-dione and 2-Hydroxy-1,3-diphenylpropan-1-one..... A. SOHMA and S. MITSUI 1451
Die Absolutkonfiguration des (—)-Isosakuranetins .....H. ARAKAWA und Y. MASUI 1452
A New Synthesis of Tris(triphenylsilyl) Vanadate ....S. SEKIGUCHI and A. KURIHARA 1453
Synthesis of 4,8-Diaminopyrimido[5,4-*d*]pyrimidine from Hydrogen Cyanide in Liquid Ammonia .....Y. YAMADA, I. NODA, I. KUMASHIRO and T. TAKENISHI 1454
Manganic Acetate Oxidation of 2′-Hydroxychalcones .....K. KUROSAWA 1456

Applied

Characteristic Chemical Constitution of Pitch Materials Suitable for the MP Carbon Fiber .. .. S. ŌTANI and A. YOKOYAMA 1417
Effect of Pressure on Graphitization of Carbon. VI. Normal Pressure Heat Treatment of Soft Carbon Pre-Heat-Treated under High Pressure. .... K. KAMIYA, M. INAGAKI and H. SAITO 1425

Short Communications

Reductive Dehalogenation of Halobenzenes with Hydrosilanes in the Presence of Free-Radical Initiators .....H. SAKURAI, M. YAMAGATA, A. HOSOMI and M. KUMADA 1461
Infrared Spectra of BF_3-NO Mixed Solids.....S. IKAWA and S. MAEDA 1462
Chromium(III) Complexes Containing Bis(salicylaldehyde)ethylenediiminate as a Ligand .. ..S. YAMADA and K. IWASAKI 1463
Acidic Cleavage of Anispinacolone. Formation of a Substituted Benzofuran *via* an Acylcarbonium Ion Intermediate .....K. OKAMOTO, I. NITTA and H. SHINGU 1464
Synthesis of 1-Oxygenated 5*β*-Cholestanes ....Y. SATOH, T. TAKAHASHI, T. AOKI and A. HAGITANI 1465

Synthesis and Use of N^{im}-Tosyl-L-histidine.....S. SAKAKIBARA and T. FUJII 1466
The Electronic Structures of Base Components of Nucleic Acids and Their Tautomers Calculated by CNDO Method .....H. FUJITA, A. IMAMURA and C. NAGATA 1467
Natural Occurrence of α-Cadinene .....Y. NAYA and M. KOTAKE 1468

No. 6

General and Physical

Polarographic Studies of the Solubilization of Disperse-dyes ..S. HAYANO and N. SHINOZUKA 1469
Molecular Orbital Treatment of Nitric Oxide Radicals. III. Spin Distributions and *g* Factors of Aromatic Nitric Oxide Radicals .....O. KIKUCHI 1472
Nature of Acid Sites on the Surface of Silica-alumina. I. The Relation between the Acid Property of Sites and the Heat of Immersion..... ..... M. MIURA, Y. KUBOTA, T. IWAKI, K. TAKIMOTO and Y. MURAOKA 1476
Photoemission from Polycyclic Aromatic Crystals in the Vacuum Ultraviolet Region. III. Aromatic Crystals and Charge-transfer Complexes .... T. HIROOKA, M. KOCHI, J. AIHARA, H. INOKUCHI and Y. HARADA 1481
Mössbauer Effect of ^{119}Sn in Molecular Complexes of Tin(IV) Chloride with Several Aromatic Compounds.....S. ICHIBA, M. MISHIMA and H. NEGITA 1486
The Heat of Immersion of Ferric Oxide in Water ....T. MORIMOTO, N. KATAYAMA, H. NAONO and M. NAGAO 1490
Nonequilibrium Thermodynamics of the Relaxing System Subject to Multinomial Distribution ..... K. ISHIDA 1493
Spectroscopic Behavior of Würster's Blue Perchlorate and *N*-Ethylphenazyl Crystals .... T. SAKATA and S. NAGAKURA 1497
Moderator Effects on the Reactions of ^{82}Br Activated by the Isomeric Transition with Gaseous Methyl Bromide .....J. OKAMOTO and E. TACHIKAWA 1504
The Molecular and Crystal Structure of Bis(2-hydroxyethyliminopyruvato)copper(II) Tetrahydrate .....K. IIJIMA, I. OONISHI, F. MUTO, A. NAKAHARA and Y. KOMIYAMA 1509
Measurement of Negative Ions Formed by Electron Impact. III. The Ionization Efficiency Curves of Negative Ions of *m/e* 26 and 42 from Nitroalkanes ....S. TSUDA, A. YOKOHATA and M. KAWAI 1515
Preparation of Star-Type Graft Copolymer through the Polymerization of Methyl Methacrylate with Use of the Potassium Complexes of Polystyrene having a Benzophenone Unit .... K. NOBUTOKI and H. SUMITOMO 1519
Thermodynamic Properties of Galvinoxyl Radical and Its Phenol Derivative; Mechanism of the Phase Transition .....A. KOSAKI, H. SUGA, S. SEKI, K. MUKAI and Y. DEGUCHI 1525
The Reactions of a Mixture of Benzene and *cis*-2-Butene Photosensitized by Cadmium .... S. TSUNASHIMA, S. SATOH and S. SATO 1531
Electrodeposition of Water-soluble Resin by a Constant Voltage or by Pulses .... Y. NAKAMURA, F. OKI and H. NOZAKI 1534
Infrared Spectra of Biuret-hydrate and Its Deuterated Compound ....T. UNO, K. MACHIDA and Y. SAITO 1539
The Crystal Structure of Riboflavin Hydrobromide Monohydrate .... N. TANAKA, T. ASHIDA, Y. SASADA and M. KAKUDO 1546

NOTES:

The Surface Rearrangement of Adsorbed Hydrogen on Platinum Electrodes .... K. SASAKI and S. YOSHIDA 1744
A Simple Treatment for the Kinetics of Radical Polymerization with Primary Radical Termination ..... K. ITO and T. MATSUDA 1758
Radiolysis of Methanol Containing Cyanogen Iodide .... H. OGURA, T. MIYAGAWA and M. KONDO 1763

An Application of Mulliken's Theory of the Charge-transfer Complex to the Hydrogen-bonding Mechanism..... K. Toyoda 1767
Nuclear Quadrupole Resonance of Nitrogen-14 in Some Aliphatic Nitriles ..... S. Onda, R. Ikeda, D. Nakamura and M. Kubo 1771

Analytical and Inorganic

Influence of Impurities on Phosphate Coating Formation ..... T. Umegaki, H. Ito and T. Okabe 1555
Determination of Traces of Constituents with Schiff Bases. III. Extraction-Spectrophotometric Determination of Nickel with Salicylidene-*o*-aminophenol.....H. Ishii and H. Einaga 1558
Scandium Content of Igneous Rocks and Some Oceanic Sediments .....T. Shimizu 1561
Chromium(III) Complexes with *N,N'*-Ethylenediaminediacetic Acid ..... Y. Fujii, E. Kyuno and R. Tsuchiya 1569
Ionic Equilibria in Mixed Solvents. IV. Solvent Effect on Dissociation Constants of Acids ..... H. Ohtaki 1573
The Kinetics of Substitution Reactions Involving Metal Complexes. XIII. Reactions of Zinc(II) with *meso*-Butylenediaminetetraacetatocobaltate(II) and with Propylenediaminetetraacetatocobaltate(II) .....H. Ogino, T. Baba and N. Tanaka 1578
Preparation and Circular Dichroism of *trans*(*N*)- and *cis*(*N*)-Isomers of (Ammoniatriacetato)-(aminoacidato)cobalt(III) Complexes ..... N. Koine, N. Sakota, J. Hidaka and Y. Shimura 1583
Spectroscopic Studies of the Structures of the Dimer of Diethylaluminum 2-Aminoethoxide $(AlEt_2OCH_2NH_2)_2$ and Related Compounds .....H. Sato, R. Tarao and H. Higashi 1588
Spectrophotometric Study of Solution Equilibria between Ammonia and Copper(II) and Nickel(II) Chelates of Aminopolycarboxylic Acids .....M. Kodama and K. Miyamoto 1596
Determination of Kinetic Parameters of the Electrode Reaction of Ethylenediaminetetraacetatoaquochromate(III) Ions by the Potentiostatic Method ....A. Yamada and N. Tanaka 1600

Notes:

The Mössbauer Spectrum of Iron Adsorbed on an Anion Exchange Resin ..... Y. Takashima, Y. Maeda and S. Umemoto 1760
The Spectrophotometric Determination of Anions by Solvent Extraction with Metal Chelate Cations. XLI. Indirect Determination of β-Hydroxynaphthoic Acid by Atomic Absorption Spectrophotometry ..Y. Yamamoto, T. Kumamaru, Y. Hayashi and S. Matsushita 1774

Organic and Biological

Epoxidation of Eight- and Twelve-Membered Cyclic Olefins with Hydrogen Peroxide in the Presence of Metal Oxide Catalysts .....J. Itakura, H. Tanaka and H. Ito 1604
Studies on Fluorene Derivatives. XXV. Abnormal Prodcuts. Tribiphenylenepropanes, of the Michael Addition of 9,9'-Bifluorenylidenes and Fluorenes, and Syntheses of Related Compounds .....K. Suzuki, M. Minabe, M. Fujimoto and N. Nohara 1609
Synthesis of Adamantane Derivatives. III. Synthesis of Adamantane Heterocycles ..... T. Sasaki, S. Eguchi and T. Toru 1617
The Alkaline Ethanolyses of Chlorophenyldiphenylsulfonium Halides, Chlorophenyl Phenylsulfones and Chloronitrobenzene in Aqueous Ethanol .....S. Oae and Y. H. Khim 1622
A Study of the Solvent Effect in the Copolymerization of *N*-Phenylethylenimine with β-Propiolactone..... T. Kagiya, T. Kondo and K. Fukui 1628
Effect of the Binary Solvent System on the Copolymerization of *N*-Phenylethylenimine with β-Propiolactone..... T. Kagiya, T. Kondo and K. Fukui 1634
Studies on Stable Free Radicals. II. Reactivity of Stable Nitroxide Radicals and NMR Spectra of Reaction Products.....K. Murayama, S. Morimura and T. Yoshioka 1640
Anionic Copolymerization of Isoprene and 1,1-Diphenylethylene ..... H. Yuki and Y. Okamoto 1644

Synthetic Studies of the Flavone Derivatives. IX. The Syntheses of Axillarin and Its Related Compounds ..... K. Fukui, M. Nakayama and T. Horie 1649
Reactions of α-Dyano-β-methoxy-β-alkylacrylic Esters with Hydrazine and Hydroxylamine ..... H. Baba, I. Hori, T. Hayashi and H. Midorikawa 1653
Solvent Effect under High Pressure. III. The Application of Electrostriction Model to the Activation Entropy ..... Y. Kondo and N. Tokura 1660
The Hydrogenation Catalysts Prepared from Transition Metal Chloride and Triethylaluminum ..... Y. Takegami, T. Ueno and T. Fujii 1663
Benzylidenation of L-Sorbose.... T. Maeda, M. Kimoto, S. Wakahara and K. Tokuyama 1668
Mass Spectrometry of Tautomeric Compounds. I. Absence of Keto-Enol Tautomerism in Fragment Ions ..... H. Nakata and A. Tatematsu 1678
The Addition Reactions of Dialkyl Phosphites to Polyfluorocyclobutenes ..... T. Ueda, K. Inukai and H. Muramatsu 1684
Polymerization of Formaldehyde in Liquid Carbon Dioxide. I. The Cause of the Polymerizability of the Monomer ..... T. Kagiya, M. Kondo, K. Narita and K. Fukui 1688
Syntheses of Pterocarpans. III. Synthetic Analogues of Neodulin ..... K. Fukui, M. Nakayama and T. Harano 1693
Thermal Decomposition of 1,1-Disubstituted-3-aryl-3-(aryloxythiocarbonyl)-2-thioureas ..... K. Miyazaki 1697
A New σ-Bonded Complex Formation between 2-Vinylpyridine and Palladium(II) or Platinum(II) Chloride ..... A. Kasahara, K. Tanaka and T. Izumi 1702
The Solvent Effects in the Acylation of Alcohol. The Effects of Liquid Sulfur Dioxide on the Eissociation of Hydrogen-bonded Alcohol ..... T. Nagai, H. Abe and N. Tokura 1705
Reaction Rates in Binary Mixed Solvents. V. ..... Y. Kondo, T. Kusaka and N. Tokura 1708
Phosphorus-proton Spin-spin Coupling in the P–O–C–H Goup. A Comparison of Cyclic and Acyclic Systems ..... M. Kainosho, A. Nakamura and M. Tsuboi 1713
The Synthesis of Cyclic α-Amino Acids. III. The Synthesis of Methyl (+)- and (−)-3-Amino-3-*C*-carboxy-3-deoxypentopyranosides ..... H. Yanagisawa, M. Kinoshita and S. Umezawa 1719

Notes:

3-[8′-Quinolinol-(5′)-yl]alanine and Related Compounds ..... K. Matsumura, T. Kasai and H. Tashiro 1741
β-Diketone Involving Fluorine. V. NMR Studies of Pivaloyltrifluoroacetone in Various Alcohols ..... K. Sato, H. Ochi and K. Arakawa 1747
Studies on Polymorphism of Glutathione ..... M. Miyoshi, K. Kotera, H. Seko, K. Masukawa, S. Imada and K. Okumura 1749
Synthesis and Melanogenesis of the DOPA Dimer ..... Y. Omote, Y. Fujinuma and N. Sugiyama 1752
Anionic Copolymerization of 2,3-Dimethylbutadiene and 1,1-Diphenylethylene with *n*-butyllithium in Benzene ..... H. Yuki, Y. Okamoto and K. Sadamoto 1754
The Schotten-Baumann Reaction of Dimethylaminobenzyl Alcohols ..... M. Tsuchiya, H. Yoshida, T. Ogata and S. Inokawa 1756
Synthetic Reactions of Aliphatic Nitro-Compounds. III. The Synthesis and Configurational Analysis of 2-Hydroxymethyl-2-aminocyclohexanedial ..... S. Zen and A. Nishikai 1761
σ-Bonded Arylpalladium(II) Complex: Bis-[*N*,*N*-dimethylbenzylamine-2-*C*,*N*]-palladium.... A. Kasahara and T. Izumi 1765
Kinetic Studies of the Acid-catalyzed Etherification of Ethyl Acetoacetate with Ethanol..... Y. Furuya, I. Urasaki, K. Itoho and S. Miyazaki 1769
Simple HMO Calculation of the Substituent Effects in Tropolone Derivatives ..... K. Imafuku and H. Matsumura 1772
A Convenient Synthesis of 3,4-Dialkyl-5-carbomethoxy-2-pyrone ..... S. Yamamura, S. Iwadare, S. Ueda and Y. Hirata 1776

Applied

Photoreversible Photographic Systems. V. Reverse Photochromism of (Photospiran/Acid) System in Acetone ..... I. Shimizu, H. Kokado and E. Inoue 1726
Photoreversible Photographic Systems. VI. Reverse Photochromism of 1,3,3-Trimethylspiro-[indoline-2,2′-benzopyran]-8′-carboxylic Acid.... I. Shimizu, H. Kokado and E. Inoue 1730
Properties of Butyl Acrylate Copolymer with Metal Ionic Crosslinkage ..... J. Hakozaki, E. Higashimura and Y. Hayashibara 1734
Effect of Coexisting Minerals on Graphitization of Carbon under Pressure. III. Accelerating Effect of Calcium Hydroxide ..... T. Noda, M. Inagaki, S. Hirano and H. Saito 1738

Short Communications

Cyclopropenones. III. The Reaction of Diphenylcyclopropenone and Ammonia to Afford *cis*- and *trans*-3,4-Diphenylazetidinones..... F. Toda, T. Mitote and K. Akagi 1777
The Two Bitter Principles of *Isodon shikokianus* Kudo ..... T. Kubota and I. Kubo 1778
Additivity of Vicinal Circular Dichroism Contributions from Different Ligands in a Cobalt(III) Complex without Configurational Chirality ..... N. Koine, N. Sakota, J. Hidaka and Y. Shimura 1779
Interaction of Stannic Chloride with Polymethylbenzenes ..... M. Hatano and O. Ito 1780
Determination of Volume Magnetic Susceptibility (Xv) by NMR ..... K. Hatada, Y. Terawaki and H. Okuda 1781
Circular Dichroism of the Square Planar Nickel(II) Complexes of $[Ni(N)_4]$ Type with L-Amino Acid Amides ..... T. Komorita, J. Hidaka and Y. Shimura 1782

No. 7

General and Physical

The Yield of Hydrogen Atoms in the Vapor Phase Radiolysis of Ammonia ..... M. Nishikawa, K. Kuroda and N. Matsuura 1783
Effect of Some Cationic Detergents on Macromolecularly Stabilized Emulsions with Special Reference to Sodium Alginate and Gum Arabic as Emulsifiers ..... C. Prakash and S. N. Srivastava 1787
Role of Doped Lithium in Nickel Monoxide in the Formation of Higher Valency Nickel Oxides by Anodic Oxidation ..... H. Yoneyama and H. Tamura 1795
A Kinetic Study on the Homogeneous Liquid-phase Oxidation of Cumene in the Presence of Triphenylsulfonium Chloride..... K. Ohkubo, T. Yamabe and K. Fukui 1800
Freezing of the Droplets of Aqueous Solution Aerosols..... Y. Uzu and I. Sano 1807
Evaluation of the Activation Energies of Radical Substitution Reactions in the Gaseous Phase. I. An Empirical Method Employing the Morse Function ..... T. Kagiya, Y. Sumida, T. Inoue and F. S. Dyachkovskii 1812
The Crystal Structure of 5,5-Dimethyl-2-oxo-2-hydroxy-1,3,2-dioxaphosphorinane Monohydrate ..... W. Murayama and M. Kainosho 1819
Solvent Effects of Charge-transfer Complexes ....J. Aihara, M. Tsuda and H. Inokuchi 1824
The Photochemical Rearrangement of Phenyl Acetate ..... H. Shizuka, T. Morita, Y. Mori and I. Tanaka 1831
Electron Spin Resonance Studies of the Formation of Anion Radicals on γ-Irradiated Silica Gel ..... Y. Yamada, A. Hasegawa and M. Miura 1836
The Electronic Spectra and the Intermolecular Interaction of Würster's Ions in Crystals .... J. Tanaka and M. Mizuno 1841
Kinetics of the Transition of Titanium Dioxide Prepared by Sulfate Process and Chloride Process ..... A. Suzuki and R. Tukuda 1853

Electronic Absorption Spectra of Unstable Species Formed by the Ultraviolet Irradiation of *N,N*-Dimethylaniline at 77°K. ..... S. Arimitsu, K. Kimura and H. Tsubomura 1858
A Theory of the Gel-forming Polymerization of Polyvinyl Compounds ..... K. Fukui and T. Yamabe 1862
Raman Effects in Ferroelectric Sodium Nitrite Crystal. II. Dependence of B_2 Type Phonon Spectrum on Propagation Direction..... M. Tsuboi, M. Terada and T. Kajiura 1871
Solution Properties of Poly-*m*-chlorostyrene ..... K. Matsumura 1874
The Dipole Moments of Diphenyl Sulfide, Sulfoxide, Sulfone, and Their Derivatives ..... Y. Toshiyasu, Y. Taniguchi, K. Kimura, R. Fujishiro, M. Yoshihara, W. Tagaki and S. Oae 1878

Notes;

Kinetics of the Oxidation of Benzyl Alcohol by Acid Permanganate ..... K. K. Banerji and P. Nath 2038
Hot-Atom Chemistry of Bromine. III. The Use of Bromides and Bromate in an Attempt at the Recoil-Synthesis of Two Organic Radiobromides in Solid Mixture Systems ..... C. Shinomiya, A. Oyoshi and T. Kishikawa 2040
The Isotope Effect of Hydrogen on the Autoxidation of Benzene and Toluene in Aqueous Solutions ..... H. Hotta, N. Suzuki and T. Komori 2041
Nuclear Quardrupole Resonance of α-Dimethyltellurium Dichloride ..... S. Kondo, E. Kakiuchi and T. Shimizu 2050
The Structure Theory of Water. II. The Thermodynamic Properties of Liquid Deuterium Oxide ..... K. Arakawa, K. Sasaki and Y. Endo 2079

Analytical and Inorganic

Derivatographic Studies on Transition Metal Complexes. I. Deaquation-Anation Reaction of Aquopentaamminechromium(III) Complexes..... R. Tsuchiya, Y. Kaji, A. Uehara and E. Kyuno 1881
Derivatographic Studies on Transition Metal Complexes. II. Thermal Reaction in the Solid State of Chromium(III) and Cobalt(III) Aquo-EDTA-like Complexes..... R. Tsuchiya, A. Uehara and E. Kyuno 1886
Mixed Conduction in Stabilized Zirconia at a Low Oxygen Partial Pressure ....K. Hirota 1892
Synthetic Hydrogen-containing Ultramarine Phases .....Y. Kubo and G. Yamaguchi 1897
Polarographic Reduction of Cobalt(II) in Acetonitrile in the Presence of Acetate Ions ..... E. Itabashi and S. Ikeda 1901
New Methods of Preparing the Mixed Cyano Cobalt(III) Complexes ..... N. Maki and S. Sakuraba 1908
The Chemistry of Protactinium. VII. The Stability of Protactinium(V) in Perchloric Acid and TTA-Benzene Solutions .....S. Suzuki and Y. Inoue 1916

Notes:

The Effect of Impurities on the Whiteness of Lanthanum Oxide .....K. Miyazaki 2046
The Spectrophotometric Determination of Scandium with Chromal Blue G .....K. Uesugi 2051
Fluorination of Inorganic Sulfur Compounds.....S. Nagase, T. Abe and H. Baba 2062
The Influence of Lanthanide Ions on the Polarographic Minima of Peroxodisulfate Ions ..... A. Iwase and T. Ito 2064
A Complex Formed by the Reaction of Ruthenium Tetroxide with 1,10-Phenanthroline in Carbon Tetrachloride .....T. Ishiyama 2071
The Separation Factor for Alkali Metals in Solvent Extraction with Hexyl ..... S. Motomizu, T. Iwachido and K. Tôei 2074
Metal Complexes of Amino Acids. IV. The Circular Dichroism of Tetrammine Cobalt(III) Complexes Containing Two Unidentate L-Amino Acid Ligands ..... T. Yasui, J. Fujita and Y. Shimura 2081

Organic and Biological

The Kinetic Studies of the Acid-catalyzed Etherification of the Tautomers of *p*-Nitrosophenol and *p*-Benzoquinoneoxime with Ethanol in Dioxane ..... **Y. Furuya, I. Urasaki, K. Itoho** and **A. Takashima** 1922
Proton NMR Studies of Substituent Effects. The Hammett-type Relationship in *meta*- and *para*-Substituted Formanilides..... **J. Niwa** 1926
Macro Chelate Rings. I. Synthesis of 2,7-Dimethyl-4,5-bis(salicylideneaminomethyl)acridone as a Quadridentate Chelating Agent and Its Metal Complexes ..... **H. Okawa** and **T. Yoshino** 1934
Secondary Structure of Poly-L-arginine and Its Derivatives ..... **T. Hayakawa, Y. Kondo** and **H. Yamamoto** 1937
Studies on Stable Free Radicals. III. Reactions of Stable Nitroxide Radicals with *S*-Radicals Derived from Benzenethiols and Thiamine .....**K. Murayama** and **T. Yoshioka** 1942
Reaction of Xanthates with *t*-Amines. VI. The Reaction Mechanism.....**H. Yoshida** 1948
Reactions of Cycloalkanone Oxime *p*-Toluenesulfonates.....**T. Sato** and **H. Wakatsuka** 1955
Kinetic Study of the Polymerization of Diallyl Carbonate ..... **A. Matsumoto, K. Takashima** and **M. Oiwa** 1959
The Basicities of Substituted Diphenyl Sulfoxides.....**S. Oae, K. Sakai** and **N. Kunieda** 1964
The Mechanism of the Alkaline Decomposition of Triarylsulfonium Bromide with Phenyllithium .....**Y. H. Khim** and **S. Oae** 1968
Synthetic Studies of Sesamol Derivatives. XI. Synthesis of 5,6-Methylenedioxy-2-isopropenylbenzo[*b*]furan .....**K. Fukui, M. Nakayama** and **S. Tanaka** 1971
The Reaction of Haloferrocenes with Copper(I) Salts in Pyridine ..... **M. Sato, T. Ito, I. Motoyama, K. Watanabe** and **K. Hata** 1976
The Reaction of Carboxylic Acids and Hydrocarbons in a Silent Electric Discharge. I. The Reaction of Acetic Acid with Ethylene .....**T. Hiraki** 1981
Intramolecular Interaction between the Hydroxyl Group and the Cyclopropane Ring ..... **M. Ōki, H. Iwamura, T. Murayama** and **I. Oka** 1986
Studies of the Organic Reactions of Metal Carbonyls. XVII. The Reaction of Potassium Iron Carbonylates with Allyl Halide and Its Derivatives .....**Y. Takegami, Y. Watanabe, T. Mitsudo** and **T. Okajima** 1992
Anionic Telomerizations of Styrene with Butylamines ..... **T. Asahara, M. Senō, S. Tanaka** and **N. Den** 1996
Organic Reactions under High Pressure. IV. Effect of Pressure on the Competitive Nitration of Benzene and Monosubstituted Benzenes. Dependence of the Substituent Effect on Pressure .....**T. Asano** 2005
Ring Expansion of Bicyclic *gem*-Dihalo- and Monohalocyclopropanes ..... **T. Ando, H. Hosaka, H. Yamanaka** and **W. Funasaka** 2013
1,3-*O*-Benzylidene-L-sorbose ....**T. Maeda, M. Kimoto, S. Wakahara** and **K. Tokuyama** 2021
The Nucleophilic Substitution Reations of 2-Aminotropone Derivatives ..... **T. Toda, S. Ryu** and **T. Nozoe** 2028
A Study of Valence Tautomerism of Cycloheptatriene-Norcaradiene ..... **T. Tsuji, S. Teratake** and **H. Tanida** 2033

Notes:

The Formation of 3-*n*-Butylamino-7-hydroxy-9-*n*-butyl-carbazolquinone(1,4) in the Reaction of *p*-Benzoquinone with *n*-Butylamine.....**K. Sugita** and **J. Kumanotani** 2043
Synthesis and Spectrophotometric Observations of Ethyl *p*-(Acetylsalicylylamino)-benzoate .. .. **Y. Noda** 2044
Triplet-Singlet Emission Spectrum of Acenaphthenequinone Vapour ..... **S. N. Singh, M. G. Jayswal** and **R. S. Singh** 2048
The Reaction of *N*-Acylmethylisoquinolinium Betain with Heterocumulens ..... **S. Sato** and **M. Ohta** 2054

Selenium Dioxide Oxidation of Styrene and Norbornene ..... K. A. Javaid, N. Sonoda and S. Tsutsumi 2056
On the Erlenmyer Reaction. II. Mechanism of DL-*threo*-*N*-Benzaldiphenylhydroxyethylamine Formation ..... K. Harada 2059
The Rearrnagement of 2-Aminobenzophenones ..... K. Isagawa, T. Ishiwaka, M. Kawai and Y. Fushizaki 2066
Preparation of Epicamphor ..... H. Takeshita, T. Muroi and S. Itô 2068
A Study of the Mechanism of the Carboxylation of Potassium Phenoxide by Means of the Carbon-14 Tracer Technique ..... Y. Yasuhara, T. Nogi and H. Saishō 2070
Proof of the Configuration at C_4 of Guaioxide ..... Y. Tanahashi, S. Tomoda and T. Takahashi 2076
Reactions of Isocyanides with Carbon Tetrahalogenides in the Presence of Dicobalt Octacarbonyl ..... Y. Yamamoto and N. Hagihara 2077

Short Communications

The Structure of a New Flavone, "Arthraxin" ..... M. Kaneta and N. Sugiyama 2084
An ESR Study of the Copper(II) Complexes of DL-α-Alanine and L-α-Alanine ..... H. Yokoi and T. Isobe 2085
Effect of Phase on the Trapped Radical in the Radiolysis of Solid Isobutane as Studied by ESR Spectroscopy ..... T. Miyazaki, T. Wakayama, K. Fueki and Z. Kuri 2086
The Spectral Blue Shift of Li(TCNQ) at High Pressures ..... I. Shirotani, N. Sakai, H. Inokuchi and S. Minomura 2087
Natural Occurrence of Humuladienone, Humulenone-II, and α-Corocalene; New Constituents of Hop Oil ..... Y. Naya and M. Kotake 2088
Preparation and Optical Resolution of μ-Amido-μ-superoxo and μ-Amido-μ-peroxo Tetrakis(α-di-imine) Dicobalt(III) Ions ..... Y. Sasaki and J. Fujita 2089
Luminol Amidine ..... Y. Omote, H. Yamamoto, S. Tomioka and N. Sugiyama 2090

No. 8

General and Physical

Infrared Study of the Conformational Equilibria of *meso*- and *racemic*-2,3-Dichlorobutanes ..... K. Iimura, N. Kawakami and M. Takeda 2091
Raman and Infrared Spectra of β-Alanine ..... R. S. Krishnan and R. S. Katiyar 2098
Optical Spectra of Transition Metals in Na_2O-P_2O_5 Glasses ..... T. Maekawa, T. Yokokawa and K. Niwa 2102
Ignition Delay Time Studies of Hydrogen and Oxygen Reactions through Silent Electric Discharge ..... K. Morinaga 2106
Theory of the Gel-forming Polymerization of Polyepoxy and Related Compounds ..... T. Yamabe and K. Fukui 2112
The Mechanism of ESR Relaxation in Peroxylamine Disulfonate Ion $\cdot ON(SO_3)_2^{2-}$ ..... S. Fujiwara and K. Sakioka 2120
The Effects of Organic Additives on the Solubilities and CMC's of Potassium Alkyl Sulfates in Water. II. Effects of Some Nonhydroxy Compounds ..... K. Shirahama, M. Hayashi and R. Matuura 2123
Reactions of Ions in the Radiolysis of Liquid Propane ..... K. Tanno and S. Shida 2128
ESR Studies of Carboxylic Acid- and Ester-Radical Anions Produced by γ-Irradiation at 77°K ..... Y. Nakajima, S. Sato and S. Shida 2132
Activity Coefficients of Aqueous Xylose and Maltose Solutions ..... H. Uedaira and H. Uedaira 2137
Diffusion Coefficients of Xylose and Maltose in Aqueous Solution. ..... H. Uedaira and H. Uedaira 2140

Studies of the Estimation of the Interfacial Energy of Embryo in Solid-Liquid Systems .... T. NAKAI 2143
Electron Diffraction Studies of Formaldehyde, Acetaldehyde and Acetone .... C. KATO, S. KONAKA, T. IIJIMA and M. KIMURA 2148
Zero-point Average Structure of Acetaldehyde .... T. IIJIMA and M. KIMURA 2159
Temperature-jump Studies of the Kinetics of the Formation of the Monochloro and Monobromo Complexes of Iron(II) .... T. YASUNAGA and S. HARADA 2165
Orbital Electronegativities in Molecules and Ionic Character in Molecular Complexes.... Y. MATSUNAGA 2170
The Crystal and Molecular Structure of Carbazole .... M. KURAHASHI, M. FUKUYO, A. SHIMADA, A. FURUSAKI and I. NITTA 2174
Mössbauer Spectral Observation of α-Fe_2O_3 Supported on Silica Gel during Activation .... T. TACHIBANA, T. OHYA, T. YOSHIOKA, J. KOEZUKA and H. IKOMA 2180
Microwave Spectrum, Barrier to Internal Rotation, and Dipole Moment of *trans*-Crotonaldehyde.... M. SUZUKI and K. KOZIMA 2183
ESR and Optical Absorption Studies of the Copper(II) Complexes of Ethylenediamine and Its Alkyl Derivatives .... H. YOKOI and T. ISOBE 2187
Thermodynamic and X-Ray Studies of Solid Solutions of Silver Bromide and Sodium Bromide .... T. TSUJI, K. FUEKI and T. MUKAIBO 2193
Heat of Immersion of Titanium Dioxide in Water. II. The Effect of the Crystallinity of Anatase .... T. OMORI, J. IMAI, M. NAGAO and T. MORIMOTO 2198
Theory of Photoselection for Zeeman Split Phosphorescence .. T. AZUMI and S. NAGAKURA 2203
ESR Studies on the Reaction of an OH Radical in α,β-Unsaturated Aldehyde .... T. ICHIKAWA and K. KUWATA 2208
Anharmonic Potential Constants and Vibrational and Rotational Parameters for Hydrogen Cyanide.... T. NAKAGAWA and Y. MORINO 2212
A Study of the Low-temperature Oxidation of Cumene in the Presence of Triphenylsulfonium Chloride. Propagation and Termination Steps.... K. OHKUBO, T. YAMABE and K. FUKUI 2220
The Mechanism of the Scintillation from a Benzene Solution of *p*-Terphenyl.... T. SAITO and S. SATO 2228
ESR Studies of Bis-(*N*,*N*-diethylethylenediamine)copper(II) Perchlorate.... H. YOKOI, M. SAI and T. ISOBE 2232

NOTES:

Hot-Atom Chemistry of Bromine. II. Application of the Szilard-Chalmers Process to Organic Molecular Compound-Pyrenebromanil and Related Compounds.... C. SHINOMIYA, A. OYOSHI and T. KISHIKAWA 2356
The Paramagnetism of Violanthrone-B .... T. MAEKAWA 2361
Contribution of Charge Transfer Structure to Exchange Interaction in the Crystal of Organic Free Radical.... T. MAEKAWA 2362
Stability Constants of Dimethyltin Dichloride and Tin Tetrachloride Complexes of *p*-Substituted Benzaldehydes, Acetophenones and *N*,*N*-Dimethylbenzamides .... G. MATSUBAYASHI, N. NISHII and T. TANAKA 2369
On the Ionic Association of Alizarine Saphirol SE in Water-dioxane Mixtures .... M. MITSUISHI, Y. FUNATSU and N. KUROKI 2384
Fluorescence Spectra of Aromatic Hydrocarbons in Polystyrene under High Pressure .... I. SHIROTANI, T. KAJIWARA and H. INOKUCHI 2387
Infrared Spectra of Bis-(2,4-dichloro-6-ethoxymercaptoisocyano-*s*-triazino-*N*,*S*) Copper(II).... K. KAWAI, F. MIZUKAMI and Y. KODAMA 2396

Analytical and Inorganic

The Kinetics of the Autoxidation of Ferrous Ions in Aqueous Tripolyphosphate Solutions .. Y. KURIMURA and H. KURIYAMA 2238

Oscillopolarographic Behaviour of Lanthanide Ions at the Dropping and Hanging-drop Mercury Electrodes ..... A. Iwase and C. Yokoyama 2243
Refinement of the Structure of Tohdite $5Al_2O_3 \cdot H_2O$ ..... G. Yamaguchi, M. Okumiya and S. Ono 2247
The Reaction between Mercury(II) and Organic Compounds. VII. The Formation Constant and Analytical Application of the *o*-(2-Thiazolylazo)-4-chlorophenol-Mercury(II) Complexes ..... F. Kai 2250
Photochemical Analysis. I. Photonometric Titration of Thallic Ion by Uranyl Photoreduction Reaction ..... Y. Yokoyama and S. Ikeda 2254
Syntheses and Properties of Some Metal Bromo-Dithiolium Complexes ..... A. Ouchi, H. Eguchi, T. Takeuchi and A. Furuhashi 2259
Electronic Absorption Spectra of the Alkali Metal Complexes with Bipyridine ..... Y. Torii, T. Yazaki, Y. Kaizu, S. Murasato and H. Kobayashi 2264
Polarographic Study of the Cadmium(II)-Ethylenediaminetetrapropionate Chelate ..... M. Kodama and Y. Tominaga 2267
The Spectrophotometric Determination of Zirconium(IV) with Bromopyrogallol Red ..... T. Sakai and Y. Funaki 2272
Methods of Preparing the 2,2′-Dipyridyl and 1,10-Phenanthroline Cobalt(III) Complexes of the $[CoX_2dip_2]$- and $[CoX_2phen_2]$-Type ..... N. Maki 2275
Spectrophotometric Determination of L-Ascorbic Acid ..... Y. Ogata and Y. Kosugi 2282
Separation Factors of Adjacent Rare Earths between the Aqueous and Resin Phases in the Presence of EDTA ..... M. Noguchi, A. Yoshifuji and Z. Hagiwara 2286
Preparation and Properties of Di-μ-alkoxo-bis(3-alkyl-5-methylsalicylaldehydato)dicopper(II) ..... T. Inazu, H. Okawa, T. Inazu and T. Yoshino 2291
Deprotonation of Oxime Complexes: Dimethylglyoxime Cobalt(III) Complexes ..... I. Masuda, M. Sakano and K. Shinra 2296
Electrochemical Behavior of Platinum in Solutions Containing Ethylenediaminetetraacetate ..... N. Tanaka and T. Fujisawa 2300

Notes:

Ultrasonic Effect on Phosphate Coating Formation ..... T. Umegaki, H. Ito and T. Okabe 2364
The Spectrophotometric Determination of Scandium with Eriochrome Azurol G ..... K. Uesugi 2398

Organic and Biological

Oligomerization of Isoprene by Zirconium Catalysts ..... A. Misono, Y. Uchida, K. Furuhata and S. Yoshida 2303
Studies on Stable Free Radicals. IV. Decomposition of Stable Nitroxide Radicals ..... K. Murayama and T. Yoshioka 2307
Synthetic Studies of 4-Oxo- and 4-Imino-3,4-dihydro-1,3-oxazoles ..... A. Chinone, S. Sato, T. Mase and Ohta 2310
Cooxidation of Hydrocarbons in Liquid Phase. VI. Reactivities of Hydrocarbons and Peroxy Radicals ..... E. Niki, Y. Kamiya and N. Ohta 2312
Coumarins. VI. The Acid-catalyzed Reaction of Phenols with β-Aminocrotononitrile ..... K. Sato, M. Ōhashi, T. Amakasu and K. Takeda 2319
Photochemical Reactions of Some Thioparabanates ..... T. Yonezawa, M. Matsumoto, Y. Matsumura and H. Kato 2323
Synthetic Studies of the Flavone Derivatives. XII. The Synthesis of 8,3′-Dimethoxy-5,7,4′-trihydroxyflavone ..... K. Fukui, M. Nakayama and T. Horie 2327
Studies of the *N*-Oxides of *N*,*N*-Dialkylamino Acids. II. The Syntheses of *N*,*N*-Dialkylglycine and corresponding *N*-Oxides ..... Y. Ikutani 2330
An Automatic Chromatographic Method for the Separation of Flavonoid Compounds ..... M. Hori 2333

Anionic Telomerizations of Styrene with Some Secondary Amines ..... T. Asahara, M. Senō, S. Tanaka and N. Den 2337
Copolymerization of Formaldehyde and Succinic Anhydride in the Presence of Carbon Dioxide ..... H. Yokota, Y. Toriuchi, T. Kagiya and K. Fukui 2343
Kinetic Studies of the Triethylenediamine-catalyzed Transamidation of 1,3-Diphenylurea with *n*-Butylamine in Dioxane ..... Y. Furuya, K. Itoho and H. Miyagi 2348
Aminosugars. XVII. Synthesis of Benzyl 2-Acetamino-2-deoxy-α-D-glucopyranosiduronic Acid-amides and *N*-(2-Acetamino-2-deoxy-D-glucuronyl)-aminoacids ..... J. Yoshimura, T. Sato and H. Ando 2352

Notes:

Benzyne Addition Induced Rearrangement to *N*-Methyl-*N*-(1-phynethyl)aniline ..... A. G. Giumanini and A. R. Lepley 2359
Studies on Cow's Urine. V. Determination by Gas-liquid Chromatography of an Acidic Part Obtained from Cow's Urine (Supplement) ..... R. Suemitsu, S. Fujita, M. Yoshimura and I. Kondo 2368
Asymmetric Hydrogenation of C=O Double Bond with Modified Raney Nickel. XII ..... Y. Izumi, S. Tatsumi and M. Imaida 2373
Studies of Japanese Lacquer: Isolation of a Diphenyl Dimer of Urushiol ..... T. Kato and J. Kumanotani 2375
Laser-induced Chemical Reaction. II. Reaction Induced by a Giant Pulse Laser ..... K. Taki, P. H. Kim and S. Namba 2377
Synthetic Studies of the Flavone Derivatives. XI. The Synthesis of 4′,5,7-Trihydroxy-3,8-dimethoxyflavone, A Pigment form *Cyanostegia angustifolia* Turcz ..... K. Fukui, T. Matsumoto and S. Tanaka 2380
A Method of Synthesizing Pyrimidine Derivatives..... I. Shibuya and M. Kurabayashi 2382
The Synthesis and Physical Properties of 1,6-Dimethyl-8,8-dicyanoheptafulvene ..... M. Oda, M. Funamizu and Y. Kitahara 2386
A New Synthetic Method of 4(1*H*)-Pyridones ..... C. Kashima, M. Yamamoto, S. Kobayashi and N. Sugiyama 2389
The Epoxidation of α,β-Unsaturated Terpene Ketones..... J. Katsuhara 2391
Syntheses of Pterocarpans. IV. A New Synthesis of 3,8,9-Trimethoxypterocarpan..... K. Fukui, M. Nakayama and K. Tsuzuki 2395

Applied

Note:

Intensity Ratio between (00*l*) Diffraction Lines of a Coke and a Simple Model of Carbon Layer Plane..... M. Inagaki 2371

Short Communications

Mechanochemical Spin Generation in a Solid Charger Transfer Complex..... M. Ohmasa, M. Kinoshita and H. Akamatu 2402
Preparation of a Dimeric Copper(II) Complex with Dithio α-Diketone ..... S. Misumi and K. Koya 2403
Isotope Effects on the Reactions of ^{82}Br Activated by Isomeric Transition between CH_4 and CD_4 ..... E. Tachikawa 2404
Natural Occurrence of Humulol and Tricyclohumuladiol..... T. Naya and M. Kotake 2405
Living Anionic Polymerization of 3-Vinylpyrene with Sodium-Naphthalene Complex ..... K. Tanikawa, H. Hirata, S. Kusabayashi and H. Mikawa 2406
Electronic Spectra of Organic Charge Transfer Salts of 2-Dicyanomethylene-1,1,3,3-tetracyano-propane..... S. Sakanoue, T. Tamamura, S. Kusabayashi, H. Mikawa, N. Kasai, M. Kakudo and H. Kuroda 2407
The Crystal Structure of an Organic Charge Transfer Salt, $[2(C_9H_8N)^+ \cdot (C_{10}N_6)^{2-}]$ ..... S. Sakanoue, N. Yasuoka, N. Kasai, M. Kakudo, S. Kusabayashi and H. Mikawa 2408

New Empirical Formulae for the Mass Effect in the Countercurrent Electromigration of Molten Metal Halides ..... N. Saito and H. Kanno 2409
Pulse Radiolysis with Electric Conductivity. A Method of Obtaining the Ratex of Propagation in the Radiation-induced Polymerization of α-Methylstyrene ..... M. Katayama, H. Yamazaki and Y. Ozawa 2410
Anodic Oxidations. I. The Electrochemical Cyanation of 2,5-Dimethylfuran ..... K. Yoshida and T. Fueno 2411
The Crystal Structure of Diamminecadmium(II) Tetracyanoniccolate(II) Benzene Clathrate, $Cd(NH_3)_2Ni(CN)_4 \cdot 2C_6H_6$ ..... Y. Sasaki 2412

No. 9

General and Physical

The Autoxidation of Ethylbenzene in the Presence of the Aqueous Phase ..... H. Hotta, M. Ito and H. Murashima 2413
Electrolytic Polymerization of Acrylonitrile. Kinetic Approach and Effect of Supporting Electrolytes ..... T. Asahara, M. Senō and M. Tsuchiya 2416
Evaluation of the Activation Energies of Radical Substitution Reactions in the Gaseous Phase. II. An Approximate Formula with Two Constants .. T. Kagiya, Y. Sumida and T. Inoue 2422
Studies on Formaldehyde-Condensation Resin. VII. Ixolation of Mono-, Di-, Tri-, and Tetramethylolacetoguanamines ..... T. Uragami and M. Oiwa 2426
ESR Spectra of the System of the Transition Metal Compound and Trialkyl Aluminum. II. The System of the Vanadium Compound and Trialkyl Aluminum ..... Y. Nozawa and M. Takeda 2431
Semi-empirical Unrestricted SCF-MO Treatment for Valence Electron Systems. I. Application to Small Doublet Radicals .. T. Yonezawa, H. Nakatsuji, T. Kawamura and H. Kato 2437
The Acidic Nature of Synthetic Zeolites: Acid Strength and Its Correlation with the Catalytic Activity ..... H. Otouma, Y. Arai and H. Ukihashi 2449
Vacuum-ultraviolet Absorption Spectra of Aliphatic Ketones ..... H. Ito, Y. Nogata, S. Matsuzaki and A. Kuboyama 2453
Studies of Ion Exchange Membranes. XXX. The Tetrahydrofuran Extraction of the Ion-exchange Membrane and Its Base Membrane Prepared by the "Paste Method" ..... Y. Mizutani 2459
Determination of S*-T Transition Probabilities of Some Xanthene and Thiazine Dyes on the Basis of T-Energy Transfer. II. Results in the Aqueous Solution ..... M. Nemoto, H. Kokubun and M. Koizumi 2464
Adsorption of Surface Active Substance at Aqueous Surface Using Tritium Labeled Compounds: Adsorption from Mixed Aqueous Solution of Sodium Dodecylsulfate and Dodecanol .... K. Tajima, M. Muramatsu and T. Sasaki 2471
Kinetics of the Adsorption of Water and Electrical Conduction in Amorphous Ferric Oxide .. R. Furuichi, N. Sato and G. Okamoto 2475
The Crystal and Molecular Structure of the High-melting-point Isomer of Bis-(1,2-diethoxycarbonyl-ethyl)tin Dibromide ..... T. Kimura, T. Ueki, N. Yasuoka, N. Kasai and M. Kakudo 2479
The Ultrasonic Study of Aqueous Solutions of Alkyl-Substituted Urea ..... K. Sasaki and K. Arakawa 2485
The Size and Shape of the Component Molecules as the Factors Determining the Electronic Structure of Crystal Complexes ..... Y. Matsunaga 2490
Effects of Metallic Surfaces on the Thermal Decomposition of Ethane ..... Y. Nishiyama 2494
The Effects of Tetraalkylammonium Salts on the Structure and the Temperature of the Maximum Density of Water ..... G. Wada and M. Miura 2498
Catalytic Vapor-Phase Ammoxidation of Substituted Toluenes over Chromium Oxide ..... K. Sakanishi and Y. Ogata 2502

Photoconductive Properties of Organic Polyiodides ..... T. Sano, K. Okamoto, S. Kusabayashi and H. Mikawa 2505
The Bond Character of the Sn–Cl Bonds in the Hydrates of Tin(IV) Chloride ..... H. Negita, T. Okuda and M. Mishima 2509
Measurement of Negative Ions Formed by Electron Impact. IV. Negative Ion Mass Spectra and Ionization Efficiency Curves of Negative Ions of *m/e* 17 and 16 from *n*-Propyl and Isopropyl Alcohols..... S. Tsuda, A. Yokohata and M. Kawai 2514
Bond Lengths of Dimethylacetylene as Determined by Gas Electron Diffraction ..... M. Tanimoto, K. Kuchitsu and Y. Morino 2519

Notes:

Infrared Absorption Bands of Benzalanilines Observed in the 1200—850 cm^{-1} Region .... K. Tabei and E. Saitou 2693
An X-Ray Emission Spectroscopic Investigation of the Chemical Bond of Sulfur. II. The Number of Valence Electrons of the Sulfur Atom in Organic Compounds ..... Y. Takahashi, K. Yabe and T. Sato 2707
Some Remarks on the Reactions of Ferricyanide Ions with Hydrogen Atoms in Alkaline Aqueous Solutions..... A. Yokohata, K. Harakon and S. Tsuda 2710
Isomerization and Hydrogenation of Dimethyl Maleate and 1,5-Cyclooctadiene by Nickel Cyanide Complex..... H. Samejima, T. Mizuta, H. Yamamoto and T. Kwan 2722
The Effect of Deuterium Exchange of Silica Gel on Dielectric Relaxation..... M. Muroya and S. Kondo 2724

Analytical and Inorganic

The Chemistry of Protactinium. VIII. Synergistic Effect of Di-isobutyl Carbinol on the Pa(V)-TTA-Benzene Solvent Extraction System..... S. Suzuki and Y. Inoue 2523
Kinetics of Multidentate Ligand Substitution Reactions. VI. The Substitution Reaction of Diethylenetriaminepentaacetic Acid with the Nitrilotriacetato Nickelate(II) Chelate ..... M. Kodama 2532
Role of the Solvent in the Distribution of the Zinc-TTA Chelate and the Adduct Formation with TBA..... K. Akiba, N. Suzuki and T. Kanno 2537
Palladium(II) Complexes of *N*-Substituted Salicylideneimines ..... S. Yamada and K. Yamanouchi 2543
The Viscosities of Aqueous Solutions Containing Metal Complexes. II. *trans*-1,2-Cyclohexanediaminetetraacetato Complexes..... M. Yasuda 2547
Dioxouranium(VI) Complexes of Schiff Bases Obtained from Substituted Salicylaldehydes and Alkyl Amines..... S. Yamada and A. Takeuchi 2549
The Syntheses and the Structure of Triethanolamine Complexes with Cobalt(II) and Nickel(II) ..... Y. Kuge and S. Yamada 2552
Shielding Effect of *Ortho*-Substituents on Magnetic Moments and d—d Bands in Chloro-*N*-phenylsalicylideneiminatocopper(II) ..... M. Kato, Y. Muto, H. B. Jonassen, K. Imai, K. Katsuki and S. Ikegami 2555
Metal Complexes of Schiff Bases Obtained from Substituted Salicylaldehydes and 2-Aminopyridine Derivatives..... S. Yamada and K. Yamanouchi 2562

Notes:

Synthetic Inorganic Ion-exchange Materials. XIII. The Mutural Separation of Alkali Metals with Three Different Antimonic Acids..... M. Abe 2683
Studies of Thin-layer Chromatography of Inorganic Salts. II. Separation of Inert Cobalt(III) Complexes by Means of Thin-layer Chromatography on Alumina ..... T. Baba, M. Muto and H. Yoneda 2697
Application of a Mercury-Coated Platinum Electrode to the A.C. Stripping Analysis of a Trace Amount of Metal Ions..... M. Kodama and T. Noda 2699

Studies of Actinium(III) in Various Solutions. III. Actinium(III) Complexes with Oxalate, Sulfate, Chloride, and Thiocyanate Ions in Perchlorate Media ..... T. Sekine and M. Sakairi 2712
Copper(II)-catalyzed Oxidation of Iron(II) by Molecular Oxygen in Tripolyphosphate Solution ..... Y. Kurimura and K. Murakami 2715
The Spectrophotometric Determination of Thorium(IV) with 4-(2-Thiazolylazo)-resorcinol .. .. T. Sakai and K. Tonosaki 2718
Chemical Studies of Minerals Containing Rarer Elements from the Far East. LXIII. Bastnaesite from Karasugawa, Fukushima Prefecture, Japan..... ..... K. Sakurai, H. Wakita, A. Kato and K. Nagashima 2725

Organic and Biological

Reactions of Thiamine Disulfide Monosulfoxides with Mercaptans .... G. Tsukamoto, T. Watanabe and I. Utsumi 2566
Alkoxysilanes. III. Preparation of Alkoxysiloxyaminosilane and Some of Its Reactions .... Y. Abe and I. Kijima 2570
Metal-Containing Initiator Systems. XVI. Radical Polymerization with Metal Carboxylates ..... S. Aoki, S. Matsumura and T. Otsu 2574
Kinetic Features of the Redox-polymerization of Acrolein with the Potassium Persulfate-Silver Nitrate System..... T. Kagiya, S. Morita and K. Fukui 2578
Graphical Evaluation of the Rate Constants of the Elementary Reactions in the Acrolein Polymerization with the Potassium Persulfate - Silver Nitrate Redox System..... ..... T. Kagiya, S. Morita and K. Fukui 2583
Synthetic Studies of the Derivatives of Acetylene. I. Reactions of 5-Bromopent-3-en-1-yne .. .. K. Sato and M. Hirayama 2589
The Absolute Configuration of Isopropylidenecamphor Oxide.....J. Katsuhara 2593
The Cobalt Carbonyl-catalyzed Hydroesterification of 3-(β-Cyanoethoxy)propene with Carbon Monoxide and Methanol..... A. Matsuda 2596
Coumarins. VII. The Acid-catalyzed Reaction of Aromatic Compounds with β-Chlorocarboxylic Acids.....K. Sato, Y.-S. Lin and T. Amakasu 2600
Argentation Constants of Styrene Derivatives ..Y. Inaki, S. Nozakura and S. Murahashi 2605
Synthetic Reactions by Complex Catalysis. XIII. Carbonylation of Amines by Group IB and IIB Metal Compound Catalysis..T. Saegusa, S. Kobayashi, K. Hirota and Y. Ito 2610
Intramolecular Hydrogen Bonding in α-Keto- and α-Alkoxy-carboxylic Acids. VII. Ultraviolet Spectra of Phenylglyoxylic Acid in Various Solvents ....M. Hirota and F. Shinozaki 2614
Structure Proof of Diarylmethanes Formed in the Jacobsen Reaction of Monochlorotetramethylbenzenes..... H. Suzuki 2618
Catalytic Activities of Salicylaldehyde Derivatives. I. Catalytic Effects of 4-Formyl-3-hydroxyphenyltrimethylammonium Bromide on the Racemization of L-Amino Acid .... M. Ando and S. Emoto 2624
Catalytic Activities of Salicylaldehyde Derivatives. II. Kinetic Studies of the Racemization of Amino Acid.....M. Ando and S. Emoto 2628
Sulfilimine. I. Synthesis and Formation Mechanism ....K. Tsujihara, N. Furukawa, K. Oae and S. Oae 2631
Conformational Studies of Acetonated α-L-Sorbo- and β-D-Fructopyranoses by Means of Proton Magnetic Resonance Spectroscopy .... T. Maeda, K. Tori, S. Satoh and K. Tokuyama 2635
The Acetalation Mechanism of L-Sorbose.....T. Maeda, Y. Miichi and K. Tokuyama 2648
A Destructive Ethylation Reaction of Benzene with 3-Methylpentane-1-^{14}C .... Y. Sugahara, J. Hayami, A. Sera and R. Gotō 2656
Synthesis of 2-Amino-4-hydroxy-6-acetyl-7-methyl-7,8-dihydropteridine..... ..... K. Sugiura and M. Goto 2662
Amine Derivatives of 1-(1′-Phenyl-2′-bromoethyl)-5-methyltetrazole..... ..... A. Terada and A. Hassner 2666

Partial Asymmetric Synthesis in the Simmons-Smith Reaction. III. A Modification of the Reaction ..... S. Sawada and Y. Inouye 2669
Aminocyclitols. XX. Bromination of DL-*epi*-Inositol ..... T. Suami, A. Suzuki, M. Uchida and S. Yanagida 2672

NOTES:

Synthesis of Hypothiaminic Esters ..... G. Tsukamoto, T. Watanabe and I. Utsumi 2686
Reaction Intermediate in the Dimerization of Ethylene Catalyzed by a Palladium(II) Complex. NMR Spectral Evidence for the Formation of the π-Bonded Chloro-acetylacetonato(1-butene) palladium(II) Complex ..... K. Kawamoto, T. Imanaka and S. Teranishi 2688
Reaction of 2,3-Dihydro-4-pyridone ..... N. Sugiyama, M. Yamamoto and C. Kashima 2690
Amino-quinoid Polymeric System. The Thermal Reaction of 2,5-Bis(*n*-butylamino)-*p*-benzoquinone ..... K. Sugita and J. Kumanotani 2695
The Syntheses of Centaureidin and 5,7,3′-Trihydroxy-3,8,4′-trimethoxyflavone ..... T. Horie 2701
A Synthesis of 2-(2′-Hydroxyethyl)cyclopentanone by the Barton Reaction ..... H. Obara and H. Kimura 2705
N-Alkylation of Metanilic Acid ..... T. Nakajima, N. Gotoh and Y. Nagai 2706
Preparation of Some Anilinosilanes ..... T. Takiguchi and M. Suzuki 2708
Electron Spin Resonance Studies of Photo-irradiated Aroylphosphonates ..... K. Terauchi and H. Sakurai 2714
Studies on Hydroxy Amino Acids. II. The Optical Resolution of α-Amino-β-hydroxy-γ-benzyloxybutyric Acid ..... K. Okawa, K. Hori, K. Hirose and Y. Nakagawa 2720
Alternate Copolymerization of Acrylonitrile and Isobutylene ..... M. Taniguchi, A. Kawasaki and J. Furukawa 2728
A Convenient Method for the Preparation of Poly(Vinyl Alcohol) from Poly(*t*-Butyl Vinyl Ether) ..... G. Ohbayashi, S. Nozakura and S. Murahashi 2729

Applied

The Rate of Penetration of Photographic Chemicals into Gelatin Layers. I. Diffusion Rate of Developing Materials ..... H. Iwano 2677

Short Communications

Photolytic Formation of a Ferrocenyl Radical from Iodoferrocene ..... T. Sato, S. Shimada and K. Hata 2731
New Addition Reactions of Acrylic Compounds with Fumaric Acid Esters Catalyzed by Tervalent Phosphorus Compounds ..... K. Morita and T. Kobayashi 2732
Aromatic Benzoyloxylation with Benzoyl Peroxide-Iodide ..... S. Hashimoto, W. Koike and M. Yamamoto 2733
Fluorescence Spectra of High-purity Coronene Thin Film ..... T. Kajiwara, K. Ohno, S. Iwashima and H. Inokuchi 2734
The Photochromism of Evaporated Photospiran ..... H. Kobayashi, I. Shimizu, M. Nakazawa, H. Kokado and E. Inoue 2735
A Revised Structure of Pyrolumisantonin ..... T. Sasaki and S. Eguchi 2736
Photochemical Benzoyloxylation with Labeled Benzoyl Peroxide ..... M. Kobayashi, H. Minato and Y. Ogi 2737
Primary Kinetic Isotope Effect for Phenylation with Phenyl Radical ..... M. Kobayashi, H. Minato and N. Kobori 2738
Reactions of Hydrazinium Thiocyanate with Alcohols ..... I. Arai, Y. Satoh, I. Muramatsu and A. Hagitani 2739
Nuclear Quadrupole Resonance of Nitrogen-14 in Tetracyanoethylene and 7,7′,8,8′-Tetracyanoquinodimethane ..... S. Onda, R. Ikeda, D. Nakamura and M. Kubo 2740

No. 10

General and Physical

Concentration Polarization Phenomena in Ion-exchange Membrane Electrodialysis. II. The Effect of the Condition of the Diffusion-boundary Layer on the Limiting-current Density and on the Relative Transport Numbers of Ions ..... R. Yamane, T. Sata, Y. Mizutani and Y. Onoue 2741
A New Acidity Function, T_0, in Acid-catalyzed Reactions ..... H. Takaya, N. Todo and T. Hosoya 2748
Effects of Substitution on the Phosphorescence Process of Aromatic Carbonyl Compounds ..... T. Takemura and H. Baba 2756
The Excited States of Acridine Dyes. I. An ESR Study of the Triplet State ..... Y. Kubota and M. Miura 2763
Hybridization of Carbon and Equilibrium Distance ..... T. Miyazaki and H. Ohbayashi 2767
Non-Newtonian Flow of Water-in-Oil Emulsions ..... K. Suzuki, S. Matsumoto, T. Watanabe and S. Ono 2773
Studies of the Direct Dissolution of Metal in a β-Diketone Reagent ..... K. Sato and Ō. Kammori 2778
The Molecular and Crystal Structure of *trans*-Dinitrotetramminecobalt(III) Nitrate Monohydrate ..... I. Oonishi, F. Muto and Y. Komiyama 2791
The Adsorption of Cobaltous Ions on Glass Beads from Extremely Dilute Aqueous Solutions ..... T. Seimiya, H. Kozai and T. Sasaki 2797
Effects of Cation Vacancies of the Diffusion of Nickel Ions in Defective Spinels ..... G. Yamaguchi, M. Nakano and M. Tosaki 2801
ESR Studies of the Negative Ions of Biphenyl Derivatives. III. Restricted Rotation of Alkyl Group in Some *ortho* or *para* Higher Alkylated Bipheny Anion Radicals ..... K. Ishizu, K. Mukai, H. Hasegawa, K. Kubo, H. Nishiguchi and Y. Deguchi 2808
Vapor Pressure of Carbon Monoxide in Condensed Phases ..... T. Shinoda 2815
Electrophotographic Properties of Titanium-Dioxide Resin Dispersion Layers ..... T. Iida and H. Nozaki 2820
Radical Conversions in γ-Irradiated 3 Methylpentane-Isobutene Systems ..... K. Tsuji and S. Okamura 2827

Notes:

Rotational Isomers in Two Crystalline Phases of *N*-Methylchloroacetamide ..... T. Miyazawa 3021
The NMR Study of Poly-L-Prolines I and II ..... R. Sakai, H. Okabayashi and T. Isemura 3028
Quenching of Rubicene Fluorescence by Amines ..... A. Nakajima and H. Akamatu 3030
Electronic Absorption Spectra of Cation Radicals of *p*-Dialkoxybenzenes in Concentrated Sulfuric Acid ..... K. Kimura and H. Yamada 3032
Nuclear Quadrupole Resonance in *syn*- and *anti*-7-Chloronorbornene ..... H. Chihara, N. Nakamura and T. Irie 3034
Dissociation Pressure of Ferric Oxide ..... K. Kodera, I. Kusunoki and M. Watanabe 3036

Analytical and Inorganic

Separation and Identification of Chlorocomplexes of Technetium(IV) formed in Hydrochloric Acid Solutions ..... Y. Kanchiku 2831
The Chromium(III) Complexes with β-Aminoethylsulfonic-*N*,*N*-diacetic Acid and Aspartic-*N*, *N*-diacetic Acid ..... A. Uehara, E. Kyuno and R. Tsuchiya 2835
The Kinetics of the Ligand-substitution Reactions of Nitrilotriacetatoniccolate(II) Complexes with *trans*-1,2-Cyclohexanediaminetetraacetate Ions ..... M. Kimura 2841
The Kinetics of the Ligand-substitution Reactions of Nitrilo(diacetic)propionato- and Nitrilo-(diacetic)isopropionatoniccolate(II) Ions with EDTA, and of Taurin-*N*-diacetatoniccolate-(II) Ions with EDTA and CyDTA ..... M. Kimura 2844

Spectroscopic Studies of the Mixture of Dialkylaluminum 2-Aminoethoxide($AlR_2OCH_2CH_2NR'_2$)$_2$ and Trialkylaluminum(AlR''_3)$_2$ ..... **H. Sato, R. Tarao** and **H. Higashi** 2849
Thermal Decomposition Reactions of Chromium(III) Complexes. Hexammine, Chloropentammine and *cis*-Dichlorotetrammine Complexes ..... **N. Tanaka** and **K. Nagase** 2854
Nitrosyl Complexes of Bis(acetylacetone)-, and Bis(benzoylacetone)-ethylenediimine Cobalt(II) ..... **M. Tamaki, I. Masuda** and **K. Shinra** 2858
Absorption Spectra and Circular Dichroisms of Metal Complexes. IV. Dichloro-diamine Type Complexes of Platinum(II) and Palladium(II) ..... **H. Ito, J. Fujita** and **K. Saito** 2863
Pyrolysis-Gas Chromatographic Determination of Chlorine in Chlorine-Containing Synthetic Polymers ..... **S. Tsuge, T. Okumoto** and **T. Takeuchi** 2870
Preparation and Properties of the Mixed Dinitro Complexes of Cobalt(III) with the Carbonato or Oxalato Ligand ..... **H. Ichikawa** and **M. Shibata** 2873
Reaction of Titanium Tetrahalides with Phenylhydrazones ..... **R. C. Aggarwal** and **S. K. Singh** 2878

Notes:

The Spectrophotometric Determination of Beryllium with Chromal Blue G ..... **K. Uesugi** 2998
Preparation and Ion-exchange Behavior of Potassium Zinc Ferrocyanide ..... **S. Kawamura, K. Kurotaki** and **M. Izawa** 3003
The Effects of Outer Sphere Cations and Halide Ions on Infrared Spectra of Pentahalogenonitrosylruthenium(III) Complexes ..... **E. Miki, T. Ishimori, H. Yamatera** and **H. Okuno** 3007
The Cation-exchange Separation of Copper and Iron in Ammoniacal Pyrophosphate Media ..... **T. Nishido** 3017

Organic and Biological

Configuration of 1,3-Dipolar Cycloaddition Products of Nitrones with *N*-Phenylmaleimide ..... **Y. Iwakura, K. Uno** and **T. Hongu** 2882
Configuration and Conformation of So-called Bis(alkylidenearylamines) ..... **M. Funabashi, M. Iwakawa** and **J. Yoshimura** 2885
Reaction of *p*-Nitrophenyl Benzensulfonates with Thiophenoxides ..... **W. Tagaki, T. Kurusu** and **S. Oae** 2894
Alkaline Hydrolysis of Aryl Benzenethiolsulfinates ..... **S. Oae, Y. Yoshikawa** and **W. Tagaki** 2899
Alkaline Hydrolysis of Aryl Benzenethiolsulfonates ..... **S. Oae, R. Nomura, Y. Yoshikawa** and **W. Tagaki** 2903
Reactive Species in the Explosion of Silver Acetylide. I. Reaction with Saturated Hydrocarbon ..... **K. Taki** 2906
A Structural Study of the Catalytic Activity in Formaldehyde Polymerization in Liquid Carbon Dioxide ..... **T. Kagiya** and **K. Narita** 2912
The Mechanism of the Base-Promoted Rearrangement of *N,N*-Dichlorocyclohexylamine to 2-Aminocyclohexanone and the Deaminative Diazotization of 2-Aminocyclohexanone ..... **M. Nakai, N. Furukawa** and **S. Oae** 2917
The Reaction of Cobalt Hydrocarbonyl with Vinylacetate, Crotonate, Styrene, and Acrylates ..... **S. Suga, H. Masada, H. Suda, Y. Watanabe** and **Y. Takegami** 2920
Studies on *s*-Triazines. I. Cotrimerization of Trichloroacetonitrile with Other Nitriles ..... **K. Wakabayashi, M. Tsunoda** and **Y. Suzuki** 2924
Studies on *s*-Triazines. II. Cotrimerization of Trichloroacetonitrile with Thiocyanates ..... **K. Wakabayashi, M. Tsunoda** and **Y. Suzuki** 2931
Reactions of Diazoketones in the Presence of Metal Chelates. II. Reactions with Olefinic Compounds ..... **M. Takebayashi, T. Ibata, H. Kohara** and **K. Ueda** 2938
Conformation and S=O Stretching Absorptions of Simple Sulfoxides ..... **M. Ōki, I. Oka** and **K. Sakaguchi** 2944
A Partial Asymmetric Synthesis *via* a Cyclic Oxyphosphorane ..... **M. Muroi, Y. Inouye** and **M. Ohno** 2948

Base-catalyzed Condensation of *o*-Nitroacetophenone. IV. Structure of Dehydro-derivative of Compound A, a Condensation Product.....T. Sakan, K. Kusuda and T. Miwa 2952
Asymmetric Reactions. III. Stereoselectivity Difference between Grignard and Alkyllithium Reactions with 2,3-*O*-Substituted-D-glyceraldehydes.....Y. Ohgo, J. Yoshimura, M. Kono and T. Sato 2957
Synthetic Studies of Cobalt Carbonyl by Noble Metal Catalysts. I. The Effects of the Form of Cobalt Feed and Noble Metal Catalysts.....S. Usami, T. Kondo, K. Nishimura and Y. Koga 2961
Synthetic Studies of Cobalt Carbonyl by Noble Metal Catalysts. II. The Investigation of Reaction Conditions.....S. Usami, K. Nishimura, T. Koyama and S. Fukushi 2966
Photoinduced Reactions. XXXIII. Photochemical Reactions of a *para*-Quinone Methide.....T. Matsuura and K. Ogura 2970
Photoinduced Reactions. XXXIV. Photosensitized Oxygenation of 2,4,5-Triphenylthiazole.....T. Matsuura and I. Saito 2973
Reactions of Diarylphosphines, Their Oxides and Sulfides with Isothiocyanates and Thiocyanic Acid.....I. Ojima, K. Akiba and N. Inamoto 2975
Photolysis of Aromatic Oxime Benzoates.....T. Okada, M. Kawanisi and H. Nozaki 2981
Studies on Hydrogenolysis. LIV. Catalytic Hydrogenolysis of Optically Active 2-Methyl-2-phenylaziridine.....Y. Sugi and S. Mitsui 2984

Notes:

The Claisen-Schmidt Condensation of Acetonitrile with Aromatic Carbonyl Compounds.....A. Uchida, S. Saito and S. Matsuda 2989
Reactions of Organometallic Compounds with Conjugated Enol Ethers: Synthesis of β-Arylacrylates, Diarylmethylmalonates and Analogus Compounds.....D. P. Nabar and S. V. Sunthankar 2991
The Reaction of Alcohols and Hydrocarbons in a Silent Electric Discharge. II. The Reaction of 2-Propanol with Ethylene—The Effects of the Reaction Conditions.....T. Hiraki 2993
Antituberclous Compounds. XXVII. Synthesis of 7,8-Dihydropyrido[2.3-*d*]pyridazin-(6*H*)-one.....S. Kakimoto and S. Tonooka 2996
Reaction of α-Phenethyl Radical in Liquid Sulfur Dioxide.....M. Iino, T. Enomoto and N. Tokura 3001
Photoreaction of 2,6-Diphenyl-4*H*-thiopyran-4-one.....N. Sugiyama, Y. Sato, H. Kataoka, C. Kashima and K. Yamada 3005
Studies of Heteroaromaticity. XXXI. New Reactions of Aromatic Amidoximes with Diketene.....T. Sasaki and T. Yoshioka 3008
Synthesis of 2-Methoxycarbonyl-5-methyl-7-methoxy-8-isopropyl-tetrahydronaphthalen-1-one and Rearrangement of Isopropyl Group of γ-(5-Isopropyl-4-methoxy-2-methylphenyl)-butyric Acid in Polyphosphoric Acid Cyclization.....K. Yamada, S. Takada, Y. Hayakawa and Y. Hirata 3011
The Chemiluminescence of Indole Accompanying Oxidation by Perbenzoic Acid.....Y. Omote, H. Yamamoto, K. Funasaki, M. Akutagawa and N. Sugiyama 3014
Synthesis of 5-Chloro-6-Methoxy-*N*-Methylisatin.....Y. Omote, H. Tazawa, Y. Fujinuma and N. Sugiyama 3016
Organische Metallkomplexe. VII. Darstellung und Eigenschaften der Kupfer(II)-chelate einiger *N*-Alkyliden-*N'*-alkanoyl-hydrazine.....H. Ohta, J. Matsuoka, T. Adachi, K. Yoshida und A. Takuwa 3019
Preparation of Ethyl 19-Bromononadecanoate by a Mixed Coupling Reaction.....Y. Suhara and S. Miyazaki 3022
Studies on Heterocyclic Chemistry. IV. Preparation of Several Trifluoromethyl-substituted Heterocyclic Compounds and Observation of Metastable Ion in the Mass Spectra of Trifluoromethyl-pyrazoles.....T. Nishiwaki 3024
Monoterpene Constituents of the Essential Oil of Mitsuba (*Cryptotaenia japonica* Hassk.).....S. Hayashi, T. Okuda and T. Matsuura 3026

Short Communications

A New Alkaloid from *Aconitum sachalinense* Fr. Schmidt ..... Y. Ichinohe and M. Yamaguchi 3038
Bi- and Tri-Nuclear Copper(II) Complexes Derived form Bi- and Tetra-dentate Schiff-base Complexes ..... M. Kato, Y. Muto, H. B. Jonassen, K. Imai, M. Kondo, K. Katsuki and S. Ikegami 3039
The Behaviour of Chemisorbed Species under the Reaction Conditions and the Mechanism of the Watergas Shift Reaction on ZnO and MgO ..... A. Ueno, T. Yamamoto, T. Onishi and K. Tamaru 3040
Polymerization by the Active Species Produced from the Charge Transfer Complex. IV. Photo-terpolymerization of *N*-Vinylpyrrolidone, Maleic Anhydride and Methyl Methacrylate ..... H. Tamura, M. Tanaka and N. Murata 3041
Polymerization by the Acitve Species Produced from the Charge Transfer Complex. V. The Thermal Copolymerization of *N*-Vinylpyrrolidone and Methyl Methacrylate ..... H. Tamura, M. Tanaka and N. Murata 3042
Hydrogen-Deuterium Exchange of Several Optically Active Complexes of Cobalt(III) in D_2O Solutions ..... H. Yamatera and M. Fujita 3043
Optical and ESR Studies on Triphenylimidazolyl Radicals Produced by Photolysis and Radiolysis at Low Temperatures ..... T. Shida, K. Maeda and T. Haysahi 3044
Acidity of Methine Hydrogen in Cyclopropyl Ketone—*Cis-Trans* Rearrangement of 1-Acetyl-2-phenylcyclopropane with Base ..... K. Ichikawa, O. Itoh and N. Yamamoto 3045
A New Pair of Isomers of a Schiff Base Nickel(II) Complex ..... A. Takeuchi and S. Yamada 3046
Rotational Raman Spectrum of Oxygen ..... K. Abe and T. Shimanouchi 3047
An ESR Study of 1 : 1 Adducts of Bis-salicylaldehyde-imine-cobalt(II) Complexes with Oxygen in Solutions ..... A. Misono and S. Koda 3048
New Type Acetylene Complexes with Mixed Transition Metals ..... K. Yasufuku and H. Yamazaki 3049
New Red-pentamminenitrosylcobalt(III) Complexes ..... E. Miki, T. Ishimori and H. Okuno 3050

No. 11

General and Physical

Magnetic and Optical Properties of Aromatic Hydrocarbon Cation Radical Salts ..... Y. Sato, M. Kinoshita, M. Sano and H. Akamatu 3051
The Effect of Organic Additives on the Autoxidation of Benzene and Toluene in the Aqueous Phase and the Kinetic Analysis ..... H. Hotta, N. Suzuki and K. Isoda 3056
An X-Ray Emission Spectroscopic Investigation of the Chemical Bond of Sulfur. III. The Profile of S$K\beta$ Band in Sulfur Compounds ..... Y. Takahashi and K. Yabe 3064
Energy Transfer between Benzene and Toluene in the Singlet States at 90°K ..... A. Nakahara, M. Koyanagi, Y. Murakami, T. Edamura and Y. Kanda 3073
The Intensity of the n–π^* Absorption Bands of Several Aliphatic Carbonyl Compounds ..... K. Ozeki, M. Inagaki and J. Tanaka 3076
The Radiolysis of Liquid Nitrogen Containing Hydrocarbons. I. Ethylene and Propylene ..... T. Oka, Y. Suda and S. Sato 3083
Radiolysis of Methylcyclohexane. II. The Effect of Cumene on Hydrogen Formation from γ-Irradiated Methylcyclohexane ..... T. Kimura, K. Fueki and Z. Kuri 3088
A Study of the Properties of Dilute Polymer Solutions by the Archibald Ultracentrifugal Method ..... A. Kotera, H. Matsuda, Y. Miyazawa and E. Joko 3093
The Crystal and Molecular Structure of the Sodium Salt of Xanthine ..... H. Mizuno, T. Fujiwara and K. Tomita 3099
The Structure-Stability Relationship of the Metal Ion Complexes of Unsaturated Compounds. V.

Stabilities of the Silver-Ion Complexes of Some *cis*-Stable Olefins ..... T. Okuyama, T. Fueno and J. Furukawa 3106
Group Interactions in Polyelectrolytes. II. Kinetics of Alkaline Hydrolysis of Polymethyl Acrylate ..... H. Kawabe and M. Yanagita 3109
Measurement of Negative Ions Formed by Electron Impact. V. Negative Ion Mass Spectra and Ionization Efficiency Curves of Negative Ions of *m/e* 16, 25 and 41 from Tetrahydrofuran .. .. S. Tsuda, A. Yokohata and M. Kawai 3115
The Electronic Structures of Glycine in the Isolated State and in Water ..... A. Imamura, H. Fujita and C. Nagata 3118
Effect of Halogens and Oxygen on the Emission of Thermal Positive Ions from the Tungsten Surface..... K. Kodera, Y. Kita I. Kusunoki, H. Kishi and A. Sakiyama 3124
On the Viscosity of Liquid Oligotrifluorochloroethylene ..... N. Yoshida, S. Hamada and T. Shirai 3131
Infrared Study of Rotational Isomers of *meso*- and *racemic*-2,3-Dibromobutane.... K. Iimura 3135
Kinetics of Reactions of Amines with Alkene Oxides ..... P. K. Sundaram and M. M. Sharma 3141
Investigations on the Kinetics and Mechanism of the Reduction of Mercuric Chloride by Malic Acid, Induced by Potassium Peroxodisulphate..... K. Kumar and L. K. Saxena 3148

Notes:

Magnetic Properties of Organic Stable Radicals. II. Porphyrexide ..... T. Fujito, H. Nishiguchi, Y. Deguchi and J. Yamauchi 3334
Disproportionation of Dimethyl *p*-Phthalate Anion Radical Paired with Alkali Metal Cation .. .. T. Kowata and M. Koizumi 3352
Acid Anhydride as an Electron Scavenger in the Radiolysis of Tetrahydrofuran ..... M. Matsui and M. Imamura 3362

Analytical and Inorganic

Oscillopolarographic Behaviour of Lanthanide Ions in Potassium Iodide Solutions ..... A. Iwase and C. Yokoyama 3155
Polarographic Study of Metal Complexes. VIII. Dicyanobis(ethylenediamine)cobalt(III) Complex with a *cis*-Configuration ..... N. Maki, K. Yamamoto, H. Sunahara and S. Sakuraba 3159
Polarographic Study of Metal Complexes. IX. Halogeno- and Aquo-bis(dimethylglyoximato)-amminecobalt(III) Complexes..... N. Maki, Y. Ishiuchi and S. Sakuraba 3166
Copper(II) Complexes of Ethylenediaminemonoacetic Acid (EDMA). A Polarographic Study of the Solution Equilibria between the Copper(II) Ion and EDMA and the Preparation of Copper(II)-EDMA Complexes..... Y. Fujii and M. Kodama 3172
The Ion Exchange of a Mixture of Er and Tm with HEDTA..... Z. Hagiwara and H. Ōki 3177
Nuclear Magnetic Resonance Study of Metal Complexes. I. A Conformational Analysis of D-(*l*)-Propylenediamine Chelate Rings of Diamagnetic Cobalt(III), Palladium(II) and Platinum(II) Complexes.....S. Yano, H. Ito, Y. Koike, J. Fujita and K. Saito 3184
Tautomerism in 3-Substituted-2,4-pentanediones and Their Copper Chelates ..... M. Tanaka, T. Shono and K. Shinra 3190
A New Monoclinic Phase of Cerium Orthovanadate($CeVO_4$).. M. Yoshimura and T. Sata 3195

Notes:

Kinetics of Multidentate Ligand Substitution Reactions. VII. Substitution Reactions of the Nickel(II)Iminodiacetate Chelate with Ethylenediaminetetraacetic Acid and 1,2-Diaminocyclohexanetetraacetic Acid and of the Cobalt(II)-Nitrilotriacetate with 1,2-Diaminocyclohexanetetraacetic Acid..... M. Kodama 3330
Infrared Absorption Spectra and Oxidation of Iron(II) Hydroxide and Green Rust I. .... T. Misawa, W. Suëtaka and S. Shimodaira 3339
Reactions of Titanium Tetrahalides with Benzoyl Hydrazine ..... R. C. Aggarwal and S. K. Singh 3363

Organic and Biological

Chemical and Spectral Study of 6- and 7-Nitro-2-Methyl, 2-Benzyl, 2-Styryl and 2-(1-Phenylstyryl)-3*H*-4-Ketoquinazolines and Their 3-Me and 3-Ph Derivatives ..... **R. K. Thakkar** and **S. R. Patel** 3198

Imidazoles. II. A General Synthesis for 1-Hydroxyimidazoles..... **K. Akagane, F. J. Allan, G. G. Allan, T. Friberg, S. Ó Muircheartaigh** and **J. B. Thomson** 3204

The Polymerizations and Copolymerizations of α-Methoxyacrylonitrile and Methyl α-Methoxyacrylate..... **T. Otsu, B. Yamada** and **H. Yoneno** 3207

Crystalline Terpolymer of Formaldehyde, Carbon Dioxide, and *N*-Phenylethylenimine ..... **T. Kagiya, K. Narita** and **M. Kondo** 3211

The Reaction of Carboxylic Acids and Hydrocarbons in a Silent Electric Discharge. II. The Reactions of Ethylene with Methyl Acetate and with Acetic Anhydride..... **T. Hiraki** 3216

Solvent Effects in the Oxidation of Hydrocarbons. I. Chain Initiation by Azobisisobutyronitrile ..... **E. Niki, Y. Kamiya** and **N. Ohta** 3220

Solvent Effects in the Oxidation of Hydrocarbons. II. Oxidations of Tetralin in Various Solvents..... **E. Niki, Y. Kamiya** and **N. Ohta** 3224

On the Oxidation of Guaiazulene..... **K. Kohara** 3229

The Reaction of Carbon Suboxide with Alicyclic Diketones and with Phenols. Formation and Structure of Pyrone Derivatives..**A. Omori, N. Sonoda, Y. Uchida** and **S. Tsutsumi** 3233

Characterization and Some Reactions of Peroxy-*trans*-crotonic Acid ..... **R. Yoshizawa** and **T. Inukai** 3238

Homolytic Chlorination of Aliphatic Compounds. II. Photochlorination of Aliphatic Nitriles.. ..... **M. Kosugi, K. Takeuchi** and **T. Migita** 3242

Sugars Containing a Carbon-phosphorus Bond. I. Photochemical Addition of Diethyl Thiophosphonate to Unsaturated Sugars..... **K. Kumamoto, H. Yoshida, T. Ogata** and **S. Inokawa** 3245

One-Electron Reduction of Carbonium Ions. II. Reduction of the Tropylium Ion and the Triphenylmethyl Cation with Metallic Powders and Metallic Ions ..... **K. Okamoto, K. Komatsu** and **H. Shingu** 3249

Intermolecular Hydrogen Bond Involving a π Base as the Proton Acceptor. VI. Hydrogen Bonding of Phenols and Naphthols to Aromatic Hydrocarbons. Entropy Anomaly and the Role of Charge-Transfer..... **Z. Yoshida** and **N. I. Ishibe** 3254

Intermolecular Hydrogen Bond Involving a π Base as the Proton Acceptor. VII. Substituents and Steric Effects in the Hydrogen Bonding of 2,6-Xylenols to Mesitylene ..... **Z. Yoshida** and **N. Ishibe** 3259

Intermolecular Hydrogen Bond Involving a π Base as the Proton Acceptor. IX. Hydrogen Bonding of Phenol to Monoolefins ..... **Z. Yoshida** and **N. Ishibe** 3263

Nitroalkenylferrocene. III. Condensation Reaction of Acetylferrocene Using Lewis Acid and Cyclic Amine..... **H. Kono, M. Shiga, I. Motoyama** and **K. Hata** 3267

Nitroalkenylferrocene. IV. Preparation of 1-Ferrocenyl-2-iodo-2-nitroethylene and Configurations of Several Nitroalkenylferrocenes..... **H. Kono, M. Shiga, I. Motoyama** and **K. Hata** 3270

β-Ferrocenyl-α,β-unsaturated Ketones. I. Condensation Reactions of Formylferrocene with Ketones..... **H. Kono, M. Shiga, I. Motoyama** and **K. Hata** 3273

Reactions of Alkyltropylium Ions with a Base..**T. Nozoe, K. Takahashi** and **H. Yamamoto** 3277

Stereochemical Studies of Monoterpene Compounds. VII. Conformational Study of 4-Hydroxymenthones by Temperature-dependent Circular Dichroism ..... **T. Shishibori, T. Suga, S. Watanabe** and **T. Matsuura** 3284

Kinetic Studies of Solvolysis. XVI. Phenolysis of *cis*- and *trans*-4-*t*-Butylcyclohexyl *p*-Toluenesulfonates. Rates and Product Distribution..... **K. Okamoto, S. Saitô** and **H. Shingu** 3288

Phenolytic Rearrangement and Isomerization of *cis*- and *trans*-4-*t*-Butylcyclohexyl *p*-Toluenesulfonates in a Phenol-Benzene Solvent..... **K. Okamoto, S. Saitô** and **H. Shingu** 3298

Effects of the Nitrone Group in NMR Spectra of α,*N*-Diphenylnitrones ..... K. Koyano and H. Suzuki 3306
Synthetic Reactions by Complex Catalysts. XIV. Reaction of Isocyanide with Amine Catalyzed by Group IB and IIB Metal Compounds ..... T. Saegusa, Y. Ito, S. Kobayashi, K. Hirota and H. Yoshioka 3310
α-Diketone Rearrangement. The Reaction of 1,2-Cyclohexanedione with Arginine and with Guanidine ..... K. Anzai 3314
Total Syntheses of Tanshinone-I, Tanshinone-II and Cryptotanshinone ..... Y. Inouye and H. Kakisawa 3318
Reaction of Modified Polypropylene Fiber Containing the Glycidyl Group with Several Amines and Ammonia ..... Y. Mizutani, K. Kusumoto, S. Matsuoka, N. Tani, Y. Suda and T. Shirota 3324

Notes:

Vinyl Polymerization. 239. Polymerization of Methyl Methacryrate with Cellulose Triacetate in Presence of Various Solvents ..... K. Kubushiro, K. Takemoto and M. Imoto 3327
Studies of Heteroaromaticity. XXXII. New Synthesis of 1,2,4-Oxadiazoles, Benzoxazoles, Benzothiazoles and Benzimidazole form Aromatic Hydroxamoyl Chlorides ..... T. Sasaki, T. Yoshioka and Y. Suzuki 3335
Gamma-Ray-Induced Addition of Formamide and Aniline to Ctotonic Acid and Its Ester ..... M. Itoh, M. Tokuda, Y. Yokoyama and A. Suzuki 3340
The Acid-catalyzed Rearrangement of Laurinterol Derivatives ..... M. Suzuki, Y. Hayakawa and T. Irie 3342
The Intramolecular Hemiacetal Structure of Benzoyl(2-hydroxybenzoyl)carbinol and Its Monobenzoate ..... H. Obara and J. Onodera 3345
The Oxidation of Limonene with Selenium Dioxide ..... Y. Sakuda 3348
Reaction of 6-Methylpicolinic Acid *N*-Oxide with Acetic Anhydride ..... Y. Murakami and J. Sunamoto 3350
Homolytic Chlorination of Aliphatic Compounds. III. Photochlorination of 1-Substituted Propanes; Steric Effects ..... M. Kosugi, K. Takeuchi and T. Migita 3354
Relative Rate of Hydrogen Abstraction by the Triplet State of Phenanthraquinone ..... K. Maruyama, K. Ono and J. Osugi 3357
Effects of Metal Chlorides on the Reaction of Acetylacetone with *n*-Butyryl Chloride ..... T. Nojiri, I. Hashimoto, M. Motoi and K. Matsui 3359

Short Communications

Total Synthesis of (—)-Artemisin ..... M. Nakazaki and K. Naemura 3366
The Crystal Structures of Pentaglycerol and Neopentylglycol ..... E. Nakano, K. Hirotsu and A. Shimada 3367
The Crystal Structure of Pyromellitic Acid Dihydrate (Benzene-1,2,4,5-tetracarboxylic Acid Dihydrate) ..... E. Takusagawa, K. Hirotsu and A. Shimada 3368

No. 12

General and Physical

An ESR Study of Photochemical Intermediates from Rigid Organic Solvents Containing Benzene ..... T. Tanei and H. Hatano 3369
Infrared Absorption Spectra of Urea-formaldehyde Initial Condensation Products. II. Dimethylurea ..... Y. Mido and H. Murata 3372
Effects of Solvent on the Copolymerization of Ethylene with Tetrafluoroethylene by Cobalt-60 Gamma Radiation ..... M. Hagiwara, T. Miura and T. Kagiya 3380
Energy Transfer from the Triplet Excited States of Aromatic Molecules to Chromium(III) Complexes ..... T. Ohno and S. Kato 3385
The Low Temperature n-π^* Absorption Spectra of the Cyclohexane-1,4-dione Crystal ..... K. Ozeki and J. Tanaka 3390
Spectroscopic Investigation of Foreign Gas Effects upon CO_2 Laser Frequencies ..... I. Suzuki and S. Suzuki 3394
An MO-theoretical Interpretation of the Nature of Chemical Reactions. II. The Governing Principles ..... K. Fukui and H. Fujimoto 3399

On the Emission of Excited Complexes Formed between Condensed Aromatic Hydrocarbons and Aliphatic Amines ..... A. NAKAJIMA 3409
Thermodynamic Properties of Carbon Tetrafluoride from 4°K to Its Melting Point ..... H. ENOKIDO, T. SHINODA and Y. MASHIKO 3415
Studies of Helical Aggregates of Molecules. I. Enantiomorphism in the Helical Aggregates of Optically Active 12-Hydroxystearic Acid and Its Lithium Salt ..... T. TACHIBANA and H. KAMBARA 3422
A Solvent-extraction and Spectrophotometric Study of Copper(II) Complexes in Organic Solvent Containing Acetylacetone and Thenoyltrifluroacetone ..... Y. HASEGAWA 3425
The "Circular Dichroism-sensitive Band" in the Optical Absorption of the Lanthanide(III) Complexes with Some Optically Active Ligands ..... S. MISUMI, S. KIDA, T. ISOBE, Y. NISHIDA and H. FURUTA 3433
Group Theoretical Treatment of Crystal Vibrations; Application to Orthorhombic Polyethylene ..... T. KITAGAWA and T. MIYAZAWA 3437
Effect of γ-Preirradiation on Catalytic Activity of Nickel Oxide for the Oxidation of Carbon Monoxide ..... Y. TEZUKA and T. TAKEUCHI 3447
NOTES:
A Thermodynamic Formulation of Reaction Rates ..... N. TAKEYAMA 3576
Competition between Photo-Ionization and Photo-Dissociation of Aromatic Compounds ..... H. TSUBOMURA 3604

Analytical and Inorganic

Studies of the Mixed Chromium(III) Complexes Containing Ethylenediamine-*N*,*N*′-diacetic Acid ..... Y. FUJII and K. YAMAMOTO 3451
Adsorption of *N*′-(2-Hydroxyethyl)-ethylenediamine-*N*,*N*,*N*′-triacetic Acid on the Hydrogen Form of Resin ..... Z. HAGIWARA and H. ŌKI 3454
Reactions of Tungsten Oxy-dichlorodialkoxides with Cyclopentadiene and Sodium Cyclopentadienide ..... S. P. ANAND, R. K. MULTANI and B. D. JAIN 3459
Kinetics of Isotopic Exchange between Acetylacetone-^{14}C and Bisacetylacetonatopalladium(II) in Organic Solvents ..... K. SAITO and M. TAKAHASHI 3462
The Indirect Determination of Mercury in an Aqueous Solution using the Ligand Exchange Reaction ..... I. KAWAI and T. HARA 3466
The Oxygenation-deoxygenation of Cobalt(II) Complexes on Polymers ..... A. MISONO, S. KODA and Y. UCHIDA 3470
Solvolysis of Organic Phosphates. II. Pyridylmethyl Phosphates as Effected by the Presence of Polyvalent Metal Ions ..... Y. MURAKAMI and M. TAKAGI 3478
Reactions of Metal Chelates. IV. The Reactions of Bis(salicylaldehydato)copper (II) with Diethylenetriamine and Triethylenetetramine ..... Y. NAKAO and A. NAKAHARA 3484
Hydrodynamic Voltammetry with the Convection Electrode. III. The Measurements of the Kinetic Parameters of the Electrode Reaction. Part I ..... J. SUZUKI 3487
NOTES:
μ-Peroxobis(pentacyano)dicobaltate(III) as an Oxidizing Agent ..... T. ASAI and T. HARA 3580
The Syntheses and Properties of Molybdenum(VI)-Amino Acids Complexes ..... H. EGUCHI, T. TAKEUCHI, A. OUCHI and A. FURUHASHI 3585
The Kinetics of the Ligand Substitution Reaction of Copper(II)-nitrilotriacetate and -nitrilo(diacetic)propionate Complexes with *trans*-1,2-Cyclohexanediaminetetraacetate Ions ..... M. KIMURA 3588
Effect of Particle Size on Infrared Spectra of Inorganic Powders ..... K. SATO, F. KUROSAWA and Ō. KAMMORI 3593
On the Stability of Silver(I) Complexes with an Imidazole and Its Derivatives ..... S. NAKATSUJI, R. NAKAJIMA and T. HARA 3598

Organic and Biological

Oxytocin Analogues Containing No Disulfide Bond. I. Synthesis of the Lactam of L-Tyrosyl-L-isoleucyl-L-glutaminyl-L-asparaginyl-L-α-L-aminosuberyl-L-prolyl-L-leucylglycine Amide ..... A. KOBAYASHI, S. HASE, R. KIYOI and S. SAKAKIBARA 3491
Constitution of Mucilage from *Ulva Conglobata*. I. Separation of Rhamnobiose Derivative by Partial Methanolysis ..... K. MITA 3496
The Diels-Alder Reactions of Polychloro-2,4-cyclohexadienones ..... K. SOMEKAWA, T. MATSUO and S. KUMAMOTO 3499

Studies of Phosphorylation. III. Selective Phosphorylation of Unprotected Nucleosides.... M. Yoshikawa, T. Kato and T. Takenishi 3505
Photochromic Color Change of the Dimer of Triphenylimidazolyl at Low Temperatures .. K. Maeda and T. Hayashi 3509
Mechanism of the Solvent Effect in a Binary Solvent System on the Cationic Polymerization of *N*-Phenylethylenimine.... T. Kagiya and T. Kondo 3514
Structural Study of the Catalytic Activity of Alkyl Chloride in the Polymerization of *N*-Phenylethyleneimine .... T. Kagiya, T. Kondo and K. Obata 3519
The N→O Acetyl Migration of 5-Substituted-2-pyrrolidinemethanols .... H. Sakurai and T. Ishimaru 3524
Alkaline Decomposition of Triarylsulfonium Halides with Various Bases .... S. Oae and Y. H. Khim 3528
Reaction of Ethyl Diazoacetate with Cupric Chloride .... T. Saegusa, Y. Ito, T. Shimizu and S. Kobayashi 3535
Synthesis of Pyrrol Nucleosides by the Photo-dehydrogenation of Δ^3-Pyrroline Derivatives .. M. Kawana and S. Emoto 3539
Preparation of Vinyl Ethers by Transetherification in the Presence of Molecular Sieves .... H. Yuki, K. Hatada, K. Nagata and K. Kajiyama 3546
Resolution of Amino Acids. IX. Studies on the Preparation of β-Hydroxyasparagines and Configuration of Natural Hydroxyasparagine .... H. Okai and N. Izumiya 3550
Electronic Spectra of *O*-Alkyl Thiobenzoates and Their Derivatives .... A. Ohno, T. Koizumi, Y. Ohnishi and G. Tsuchihashi 3556
Oxidation Reactions of 2,4,6-Tri-*t*-butylaniline.... R. Okazaki, T. Hosogai, M. Hashimoto and N. Inamoto 3559
Triazene Rearrangement. III. A Kinetic Study of the Rearrangement of *N*-Methyldiaryltriazenes .... T. Yamada 3565

Notes:

Effects of Temperature and of Mixing on Dielectric Constants of Several Organic Solvents .... E. Niki, Y. Kamiya and N. Ohta 3578
Studies on Reactions of Isoprenoids. VI. Synthesis of *cis*-Homochrysanthemic Acid and Its Derivatives from Δ^3-Carene .... T. Sasaki, S. Eguchi, M. Ohno and T. Oyobe 3582
Two Phenol Ethers and an Aliphatic Ketone of the Essential Oil of the Kusunoki (*Cinnamomum camphora* Sieb.).... S. Hayashi, K. Yano and T. Matsuura 3591
Synthesis of a Fragment (Pentapeptide) of *E. Coli* Acyl Carrier Protein Apoprotein.... Y. Miura and S. Seto 3592
Photoisomerization of 1,2-Diphenyl-6-methyl-2,3-dihydro-4-pyridone .... C. Kashima, M. Yamamoto, Y. Sato and N. Sugiyama 3596
The Fries Rearrangement of 2-Ethyl-5-acetyloxybenzofuran .... T. Nakanishi, K. Kimura, K. Itō, M. Ikemoto and Y. Ōishi 3600
Polymerization of Methyl Methacrylate by Amide-Carbon Tetrachloride System .... K. Kaeriyama 3602
N-Alkylation of Primary and Secondary Amines by Alkyl Halides and Lithium Naphthalene .... K. Suga, S. Watanabe, T. Fujita and T. P. Pan 3606
Solvent Effect in the Base-catalyzed Hydrogen Isotopic Exchange Reaction of α-Deuteriodiphenylthioacetal .... I. Minamida, K. Uneyama, W. Tagaki and S. Oae 3609
Preparation of Sterically Hindered Nitrosobenzenes.... R. Okazaki, T. Hosogai, E. Iwadare, M. Hashimoto and N. Inamoto 3611

Applied

n-π^* Electronic Spectra of 2-Methyl-1,4-naphthoquinone in the Vapour Phase .... G. D. Baruah, S. N. Singh and R. S. Singh 3572

Short Communications

Substitution Reaction of 1-Bromoadamantane in Dimethyl Sulfoxide: Simple Synthesis of 1-Azidoadamantane .... T. Sasaki, S. Eguchi and T. Toru 3613
The Reaction of Cholest-4-en-3β-ol(Allocholesterol) with the Dichlorobis(triphenylphosphine)-platinum(II)Stannous Chloride Complex.... Y. Ichinohe, N. Kameda and M. Kujirai 3614
Farnesenes Isolated from the Volatile Oil of *Perilla frutscens f. viridis* Makino .... T. Sakai and Y. Hirose 3615
Preparation of Cyclic Phosphates of Uranium(VI) .... M. Kamo and S. Ohashi 3616
Polarography of the Dicyano Cobalt(III) Complexes.... N. Maki 3617

AUTHOR INDEX TO VOLUME 42, 1969

ABE, H. See NAGAI, T., 1705.
ABE, K. Rotational Raman Spectrum of Oxygen 3047
ABE, M. Synthetic Inorganic Ion-exchange Materials. XIII 2683
ABE, O. See AOYAGI, H., 782
ABE, T. See NAGASE, S., 2062
ABE, Y. Alkoxysilanes. I.....1148
II 1118
III.....2570
ADACHI, T. See FUJINAGA, T., 140.
ADACHI, T. See OHTA, H., 3019.
AGGARWAL, R. C. Reaction of Titanium Tetrahalides with Phenylhydrazones.....2878
AGGARWAL, R. C. Reaction of Titanium Tetrahalides with Benzoyl Hydrazine 3363
AIHARA, J. Solvent Effects of Charge-transfer Complexes 1824
AIHARA, J. See HIROOKA, T., 1481.
AKAGANE, K. Imidazoles. II 3204
AKAGI, K. See TODA, F., 567. 829. 1777.
AKAMATU, H. See AMANO, T., 671.
AKAMATU, H. See NAKAJIMA, A., 3030.
AKAMATU, H. See OHMASA, M., 2402.
AKAMATU, H. See SATO, Y., 548. 3051.
AKASHI, K. See KUSAKAWA, H., 263.
AKAZA, I. The Separation of Hexacyanoferrate(II) and Hexacyanoferrate(III) Ions by Reversed-phase Partition Chromatography.....1291
AKIBA, K. Role of the Solvent in the Distribution of the Zinc-TTA Chelate and the Adduct Formation with TBP 2537
AKIBA, K. See OJIMA, I., 2975.
AKIMOTO, S. See SHIROTANI, I., 366.
AKUTAGAWA, M. See OMOTE, Y., 3014.
ALLAN, F. J. See AKAGANE, K., 3204.
ALLAN, G. G. See AKAGANE, K., 3204.
AMAKASU, T. See SATO, K., 2319. 2600.
AMAKO, Y. See HASEGAWA, Y., 840.
AMANO, T. The Charge-transfer Bands in the Crystal Spectra of Molecular Compounds of Tetramethylbenzidine and Those of Benzidine 671
ANAND, S. K. Zirconium Ethoxide: A New Method of Preparation..... 554
ANAND, S. P. Reactions of Tungsten Oxy-dichlorodialcoxides with Cyclopentadiene and Sodium Cyclopentadienide 3459
ANDO, H. See YOSHIMURA, J., 2352.
ANDO, M. Catalytic Activities of Salicylaldehyde Derivatives. I 2624
II 2628
ANDO, T. Ring Expansion of Bicyclic *gem*-Dihalo- and Monohalocyclopropanes 2013
ANZAI, K. α-Diketone Rearrangement. The Reaction of 1,2-Cyclohexadiene with Arginine and with Guanidine 3314
AOKI, K. See TSUZUKI, Y., 1052.
AOKI, S. Metal-Containing Initiator Systems. XVI 2574
AOKI, T. The Crystal Structure of Tetraalkyldichromium, $Cr_2(C_3H_5)_4$ 545
AOKI, T. See SATOH, Y., 1465.
AOYAGI, H. Studies of Peptide Antibiotics. XIV.. 782
AOYAMA, H. See SUGIYAMA, N., 1377.
ARAI, I. Reactions of Hydrazinium Thiocyanate with Alcohols 2739
ARAI, T. See ASAHARA, T., 1316.
ARAI, Y. See OTOUMA, H., 2449.
ARAKAWA, H. Die Absolutkonfiguration des (−)-Isosakuranetins 1452
ARAKAWA, K. Ultrasonic Relaxation of Water-Dioxane System 5
ARAKAWA, K. The Structure Theory of Water. I 303
II 2079
ARAKAWA, K. See SASAKI, K., 2485.
ARAKAWA, K. See SATO, K., 1747.
ARIMITSU, S. Electronic Absorption Spectra of Unstable Species Formed by the Ultraviolet Irradiation of *N,N*-Dimethylaniline at 77°K 1858
ASAHARA, T. The Ionic Telomerization of Diene Compounds. IV 1065
ASAHARA, T. A Mechanistic Approach to the Electrolytic Reductive Dimerization of Acrylonitrile 1316
ASAHARA, T. Studies on Telomerization of Vinyl Chloride with Carbon Tetrabromide.....1373
ASAHARA, T. Anionic Telomerizations of Styrene with Butylamines 1996
ASAHARA, T. Anionic Telomerizations of Styrene with Some Secondary Amines.....2337
ASAHARA, T. Electrolytic Polymerization of Acrylonitrile. Kinetic Approach and Effect of Supporting Electrolytes 2416
ASAI, S. See MAEDA, I., 1435.
ASAI, T. μ-Peroxobis(pentacyano)dicobaltate(III) as an Oxidizing Agent 3580
ASANO, T. Organic Reactions under High Pressure. IV 2005
ASANO, Y. See MÓRI, N., 482. 488.
ASARI, T. See OAE, S., 177.
ASHIDA, T. See TANAKA, N., 1546.
AZUMI, H. See HASEGAWA, Y., 840.
AZUMI, T. Zeeman Effect of Phosphorescence. II 685
AZUMI, T. Theory of Photoselection for Zeeman Split Phosphorescence 2203
BABA, H. Radiative and Radiationless Processes in Phthalazine 276
BABA, H. Reactions of α-Cyano-β-methoxy-β-alkylacrylic Esters with Hydrazine and Hydroxylamine 1653
BABA, H. See NAGASE, S., 2062.
BABA, H. See TAKEMURA, T., 2756.
BABA, T. Studies of Thin-layer Chromatography of Inorganic Salts. II 2697
BABA, T. See OGINO, H., 1578.
BANERJI, K. K. Kinetics of the Oxidation of Benzyl Alcohol by Acid Permanganate 2038

BANSAL, O. P. See SINGH, M., 551.
BARUAH, G. D. n-π^* Electronic Spectra of 2-Methyl-1,4-naphthoquinone in the Vapour Phase 3572
BERA, B. C. Gravimetric Determination of Palladium, Silver, Mercury and Copper with 2-Mercaptomethylbenzimidazole..... 383
BHARGAVA, P. N. Studies on 6-Bromo-2-mercapto-3-substituted 4-(3*H*)-Quinazolinones 1444
CHAKRABARTTY, M. M. See BERA, B. C., 383.
CHANG, W. See IWAKURA, Y., 741.
CHIBA, T. See ITO, T., 108.
CHIGIRA, Y. Syntheses and Reactions of *N*-(Phenylpyruvoyl) Amino Acids..... 224
CHIGIRA, Y. Reaction of *N*-(α-Acetoxycinnamoyl)-*N*-hydroxy Derivatives of DL-Alanine Esters. Formation of Imidazolidinone and Its Transformations into Pyrrolidinedione and Oxazolidinone 228
CHIGIRA, Y. See SHIN, C.-G., 191.
CHIGIRA, H. Nuclear Quadrupole Resonance in *syn*- and *anti*-7-Chloronorbornene 3034
CHINONE, A. Synthetic Studies of 4-Oxo- and 4-Imino-3,4-dihydro-1,3-oxazoles.....2310
CHOU, M. C. See ASAHARA, T., 1373.
CHUBACHI, S. The Decomposition of Cyclohexyl Hydroperoxide in the Presence of Cyclohexanone and a Novel Rearrangement Product 789
CUSACHS, L. C. See MUTO, Y., 417.
DEGUCHI, Y. See FUJINO, T., 3334.
DEGUCHI, Y. See ISHIZU, K., 2808.
DEGUCHI, Y. See KOSAKI, A., 1525.
DEN, N. See ASAHARA, T., 1996. 2337.
DOI, S. See KINOSHITA, M., 194.
DOI, Y. See TARAMA, K., 1161.
DRUMMOND, L. J. Shock Induced Reactions of Methane with Nitrous and Nitric Oxides..... 285
DYACHKOVSKII, F. S. See KAGIYA, T., 1812.
ECHIGOYA, E. See MASAI, M., 464.
EDAMURA, T. See NAKAHARA, A., 3073.
EGUCHI, H. The Syntheses and Properties of Molybdenum(VI)-Amino Acids Complexes 3585
EGUCHI, H. See OUCHI, A., 2259.
EGUCHI, S. See SASAKI, T., 558. 1617. 2736. 3582. 3613.
EIMURA, K. See SUEHIRO, T., 737.
EINAGA, H. See ISHII, H., 1558.
EMOTO, S. See ANDO, M., 2624. 2628.
EMOTO, S. See KAWANA, M., 3539.
ENDO, H. Synthesis of 1- and 2-Piperidinophenazine Derivatives 502
ENDO, H. Synthesis of 1- and 2-Morpholinophenazine Derivatives 506
ENDO, H. Preparation of Carboxymethylthiophenazines 566
ENDO, T. Syntheses and Reactions of Functional Polymers. XLV 1101
ENDO, Y. See ARAKAWA, K., 2079.
ENOKIDO, H. Thermodynamic Properties of Neopentane from 4°K to the Melting Point and Comparison with Spectroscopic Data..... 84
ENOKIDO, H. Thermodynamic Properties of Carbon Tetrafluoride from 4°K to Its Melting Point ..3415
ENOMOTO, G. See IINO, M., 3001.
FRIBERG, T. See AKAGANE, K., 3204.
FUEKI, K. See KIMURA, T., 3088.
FUEKI, K. See MIYAZAKI, T., 894. 2086.
FUEKI, K. See NODA, S., 16.
FUEKI, K. See TSUJI, T., 2193.
FUEKI, K. See WAKAYAMA, T., 266. 1164.
FUENO, T. See OKUYAMA, T., 3106.
FUENO, T. See YOSHIDA, K., 2411.
FUJII, M. See YONEZAWA, T., 1248.
FUJII, T. See SAKAKIBARA, S., 1466.
FUJII, T. See TAKEGAMI, Y., 1663.
FUJII, Y. The Mixed Chromium(III) Complexes Containing Acetylacetone and the Halogenations Thereof.....1301
FUJII, Y. Chromium(III) Complexes with *N*,*N*'-Ethylenediaminediacetic Acid 1569
FUJII, Y. Copper(II) Complexes of Ethylenediaminemonoacetic Acid (EDMA). A Polarographic Study of the Solution Equilibria between the Copper(II) Ion and EDMA and the Preparation of Copper(II)-EDMA Complexes 3172
FUJII, Y. Studies of the Mixed Chromium(III) Complexes Containing Ethylenediamine-*N*,*N*'-diacetic Acid 3451
FUJIMOTO, H. See FUKUI, K., 348. 3399.
FUJIMOTO, H, See HAO H., 1256.
FUJIMOTO, M. See SUZUKI, K., 1609.
FUJINAGA, T. Polarographic Studies of Dissolved Oxygen in DMSO-Water Mixtures 140
FUJINUMA, Y. See OMOTE, Y., 569. 1752. 3016.
FUJISAKI, Y. See KUBOTA, Y., 853.
FUJISAWA, T. See TANAKA, N., 2300.
FUJISHIRO, R. See MURAKAMI, T., 35.
FUJISHIRO, R. See TOSHIYASU, Y., 1878.
FUJITA, H. The Electronic Structures of Base Components of Nucleic Acids and Their Tautomers Calculated by CNDO Method 1467
FUJITA, H. See IMAMURA, A., 3118.
FUJITA, J. See ITO, H., 1286. 2863.
FUJITA, J. See SASAKI, Y., 146. 2089.
FUJITA, J. See YANO, S., 3184.
FUJITA, J. See YASUI, T., 2081.
FUJITA, M. See YAMATERA, H., 3042.
FUJITA, S. See NOZAKI, H., 1163.
FUJITA, S. See SUEMITSU, R., 2368.
FUJITA, T. See SUGA, K., 3306.
FUJITO, T. Magnetic Properties of Organic Stable Radicals. II 3334
FUJIWARA, S. The Mechanism of ESR Relaxation in Peroxylamine Disulfonate Ion $\cdot ON(SO_3)_2^{2-}$..2120
FUJIWARA, T. See MIZUNO, H., 3099.
FUKUDA, K. Decomposition of Formic Acid on Silver Catalyst—Adsorption Measurement during Surface Catalysis— 1192
FUKUI, K. A New Synthesis of Tephrosic Acid .. 199
FUKUI, K. The Synthesis of 3-Hydroxy-8,9-dimethoxypterocarpan 233
FUKUI, K. The Catalytic Activity of Onium Compounds in the Homogeneous Liquid Phase Oxidation of Cumene and α-Pinene..... 312
FUKUI, K. An MO-Theoretical Study of Several Bimolecular Reactions of Nucleophilic Reagents 348
FUKUI, K. Synthetic Studies of the Flavone Derivatives. IX.....1649
X 1398
FUKUI, K. Syntheses of Pterocarpans. II 1408
III.....1693
IV 2395

FUKUI K. Synthetic Studies of Sesamol Derivatives. XI 1971
FUKUI, K. Synthetic Studies of the Flavone Derivatives. XI 2380
XII 2327
FUKUI, K. A Theory of the Gel-forming Polymerization of Polyvinyl Compounds 1862
FUKUI, K. An MO-theoretical Interpretation of the Nature of Chemical Reactions. II 3399
FUKUI, K. See HAO, H., 1256.
FUKUI, K. See KAGIYA, T., 1094. 1628. 1634. 1688. 2578. 2583.
FUKUI, K. See KITA, S., 66.
FUKUI, K. See OHKUBO, K., 1800. 2220.
FUKUI, K. See YAMABE, T., 2112.
FUKUI, K. See YOKOTA, H., 1412. 2343.
FUKUSHI, S. See USAMI, S., 2966.
FUKUTOMI, H. See KOJIMA, T., 875.
FUKUYAMA, T. Structure of Vinylacetylene Determined by Electron Diffraction and Spectroscopy 379
FUKUYO, M. See KURAHASHI, M., 2174.
FUNABASHI, M. Configuration and Conformation of so-called Bis(alkylidenearylamines) 2885
FUNAKI, Y. See SAKAI, T., 2272.
FUNAMIZU, M. See ODA, M., 2386.
FUNASAKA, W. See ANDO, T., 2013.
FUNASAKI, K. See OMOTE, Y., 3014.
FUNATSU, Y. See MITSUISHI, M., 2384.
FURUHASHI, A. Halogenation Reaction of Bis(dithioacetylacetonato) Complexes of Cobalt(II) and Nickel(II) 260
FURUHASHI, A. See EGUCHI, H., 3585.
FURUHASHI, A. See OUCHI, A., 2259.
FURUHATA, K. See MISONO, A., 1383. 2303.
FURUICHI, R. Kinetics of the Adsorpiton of Water and Electrical Conduction in Amorphous Ferric Oxide 2475
FURUKAWA, J. See OKUYAMA, T., 3106.
FURUKAWA, J. See TANIGUCHI, M., 2728.
FURUKAWA, N. See NAKAI, M., 2917.
FURUKAWA, N. See OAE, S., 177.
FURUKAWA, N. See TSUJIHARA, K., 2631.
FURUNO, N. See OGURA, T., 643.
FURUOYA, N. See SUDO, R., 1380.
FURUSAKI, A. See AOKI, T., 545.
FURUSAKI, A. See KURAHASHI, M., 2174.
FURUTA, H. See MISUMI, S., 3433.
FURUYA, Y. Kinetic Studies of the Acid-catalyzed Etherification of Ethyl Acetoacetate with Ethanol 1769
FURUYA, Y. The Kinetic Studies of the Acid-catalyzed Etherification of the Tautomers of *p*-Nitrosophenol and *p*-Benzoquinoneoxime with Ethanol in Dioxine 1922
FURUYA, Y. Kinetic Studies of the Triethylenediamine-catalyzed Transamidation of 1,3-Diphenylurea with *n*-Butylamine in Dioxane 2348
FUSHIZAKI, Y. See ISAGAWA, K., 2066.
GIUMANINI, A. G. Benzyne Addition Induced Rearrangement to *N*-Methyl-*N*-(1-phenethyl)aniline. . 2359
GOTO, M. See SUGIURA, K., 2662.
GOTŌ, H. See HIROKAWA, K., 693.
GOTŌ, R. See SUGAHARA, Y., 2656.
GOTŌ, R. See WATANABE, A., 1360.
GOTOH, N. See NAKAJIMA, T., 2706.
GUPTA, K. C. Kinetics and Mechanism of Oxidation of D-Glucose and D-Fructose by Potassium Ferricyanide in the Presence of Ammonia 599
HAGIHARA, N. See YAMAMOTO, Y., 2077.
HAGIHARA, N. See YAMAZAKI, H., 275.
HAGIWARA, M. Effects of Solvent on the Copolymerization of Ethylene with Tetrafluoroethylene by Cobalt-60 Gamma Radiation 3380
HAGIWARA, Z. The Ion Exchange of a Mixture of Er and Tm with HEDTA 3177
HAGIWARA, Z. Adsorption of *N'*-(2-Hydroxyethyl)-ethylenediamine-*N,N,N'*-triacetic Acid on the Hydrogen Form of Resin 3454
HAGIWARA, Z. See NOGUCHI, M., 2286.
HAGITANI, A. See ARAI, I., 2739.
HAGITANI, A. See SATOH, Y., 1465.
HAGITANI, A. See SŌFUKU, S., 278.
HAKOZAKI, J. Properties of Butyl Acrylate Copolymer with Metal Ionic Crosslinkage 1734
HAMADA, K. Reactions of Metal Chelates. III .. 1297
HAMADA, S. On the Viscocity of Liquid Selenium .. 1025
HAMADA, S. See YOSHIDA, N., 3131.
HANAI, K. See UNO, T., 619.
HANAMOTO, Y. See YAMAMOTO, Y., 268.
HANAZAKI, I. See ITO, T., 702.
HAO, H. An MO-Theoretical Study of the E2 Reaction of Ethyl Chloride 1256
HAO, H. See FUKUI, K., 348.
HARA, K. Magnetic Moments of Copper(II) Diethyldithiocarbamate and Related Compounds .. 576
HARA, T. See ASAI, T., 3580.
HARA, T. See KAWAI, I., 3466.
HARA, T. See NAKATSUJI, S., 3598.
HARADA, K. On the Erlenmyer Reaction. II 2059
HARADA, S. See YASUNAGA, T., 2165.
HARADA, T. See IZUMI, Y., 241.
HARADA, Y. See HIROOKA, T., 1481.
HARAKON, K. See YOKOHATA, A., 2710.
HARANO, T. See FUKUI, K., 199. 233. 1693.
HASE, S. See KOBAYASHI, A., 3491.
HASEGAWA, A. The Electron Spin Resonance of the Trinuclear Vanadyl Pyrophosphate Complex .. 846
HASEGAWA, A. See YAMADA, Y., 1836.
HASEGAWA, H. See ISHIZU, K., 2808.
HASEGAWA, M. See YAMAMOTO, T., 1364.
HASEGAWA, Y. The Near Ultraviolet Absorption Spectrum of Quinoxaline Vapor 840
HASEGAWA, Y. Some Observations of the Water Activity in Uni-uni Valent Electrolyte Solutions .. 1429
HASEGAWA, Y. A Solvent-extraction and Spectrophotometric Study of Copper(II) Complexes in Organic Solvents Containing Acetylacetone and Thenoyltrifluoroacetone 3425
HASEGAWA, Y. See SEKINE, T., 432.
HASHIMOTO, H. See MIYANO, S., 746.
HASHIMOTO, H. See WADA, K., 562.
HASHIMOTO, I. See NOJIRI, T., 3359.
HASHIMOTO, M. See OKAZAKI, R., 3559. 3611.
HASHIMOTO, S. Aromatic Benzoyloxylation with Benzoyl Peroxide-Iodide 2733
HASSNER, A. See TERADA, A., 2666.
HATA, K. See KONO, H., 3267. 3270. 3273.
HATA, K. See SATO, M., 1976.
HATA, K. See SATO, T., 766. 773. 2731.
HATA, K. See SHIGA, M., 798.
HATADA, K. Determination of Volume Magnetic Susceptibility (X_v) by NMR 1781

HATADA, K. See YUKI, H., 3546.
HATANO, H. See TANEI, T., 3369.
HATANO, M. Interaction of Stannic Chloride with Polymethylbenzenes 1780
HAYAKAWA, T. The Synthesis of Poly-L-arginine Hydrobromide and Copolymers of L-Arginine and Other Amino Acids 479
HAYAKAWA, T. Secondary Structure of Poly-L-arginine and Its Derivatives 1937
HAYAKAWA, Y. See IRIE, T., 843.
HAYAKAWA, Y. See SUZUKI, M., 3342.
HAYAKAWA, Y. See YAMADA, K., 3011.
HAYAMI, J. See SUGAHARA, Y., 2656.
HAYANO, S. Polarographic Studies of the Solubilization of Disperse-dyes.....1469
HAYASHI, K. See OHNISHI, A., 1113.
HAYASHI, M. See SHIRAHAMA, K., 1206. 2123.
HAYASHI, S. Reaction of Vetivazulene with Sulfur. 3,5,9-Trimethylazuleno[1,2-*b*]thiobphene 1404
HAYASHI, S. Monoterpene Constituents of the Essential Oil of Mitsuba (*Cryptotaenia japonica* Hassk.) 3026
HAYASHI, S. Two Phenol Ethers and an Aliphatic Ketone of the Essential Oil of the Kusunoki (*Cinnamomum camphora*, Sieb.).....3591
HAYASHI, S. See SATO, T., 773.
HAYASHI, T. See BABA, H., 1653.
HAYASHI, T. See MAEDA, K., 3509.
HAYASHI, T. See SHIDA, T., 3043.
HAYASHI, Y. See YAMAMOTO, Y., 1774.
HAYASHIBARA, Y. See HAKOZAKI, J., 1734.
HENMI, C. See NOZAKI, T., 245.
HIDA, M. See MIYANO, S., 746.
HIDAKA, J. See KAIZAKI, S., 988.
HIDAKA, J. See KOINE, N., 1583. 1779.
HIDAKA, J. See KOMORITA, T., 168. 1782.
HIDAKA, J. See YAMASAKI, K. 119.
HIGASHI, H. See SATO, H., 1588.
HIGASHI, M. See TODA, F., 567. 829.
HIGASHIMURA, E. See HAKOZAKI, J., 1734.
HIGASI, K. See KIYOHARA, O., 1158.
HIGOSAKI, N. See MINATO, H., 779.
HIKITA, T. See TSUCHIYA, S., 847.
HINE, F. Solubility of Chlorine in Mixed Solutions of HCl and $CuCl_2$..... 914
HINENO, H. See UMEZAWA, S., 537.
HIRAIWA, O. See NOZAKI, T., 245.
HIRAKI, T. The Reaction of Alcohols and Hydrocarbons in a Silent Electric Discharge. I 470
II 2993
HIRAKI, T. The Reaction of Carboxylic Acids and Hydrocarbons in a Silent Electric Discharge. I 1981
II 3216
HIRANO, H. See OBARA, H., 560.
HIRANO, S. See NODA, T., 1738.
HIRATA, H. See TANIKAWA, K., 2406.
HIRATA, Y. See YAMADA, K., 3011.
HIRATA, Y. See YAMAMURA, S., 1776.
HIRAYAMA, M. See SATO, K., 250. 2589.
HIROKAWA, K. Emission Spectrographic Analysis of Metal Solid Samples with Plasma Jet Flame. I 693
HIROOKA, T. Photoemission from Polycyclic Aromatic Crystals in the Vacuum Ultraviolet Region. III.....1481
HIROSE, K. See OKAWA, K., 2720.
HIROSE, Y. See SAKAI, T., 3615.
HIROTA, K. Mixed Conduction in Stabilized Zirconia at a Low Oxygen Partial Pressure.....1892
HIROTA, K. See SAEGUSA, T., 2610. 3310.
HIROTA, K. See YAMASHITA, T., 1145.
HIROTA, M. Intramolecular Hydrogen Bonding in α-Keto- and α-Alkoxy-carboxylic Acids. VII ..2614
HIROTSU, K. See NAKANO, E., 3366.
HIROTSU, K. See TAKUSAGAWA, F., 3367.
HONDA, I. See SAKAKIBARA, S., 809.
HONGU, T. See IWAKURA, Y., 2882.
HONJYO, Y. The Synergistic Effect in Solvent Extraction. The Effect of the Chelating Ligands on the Stability Constant of Lutetium β-Diketonate Adducts with TOPO 995
HONJYO, T. See SHIGEMATSU, T., 976.
HORI, I. See BABA, H., 1653.
HORI, K. See OKAWA, K., 2720.
HORI, M. An Automatic Chromatographic Method for the Separation of Flavonoid Compounds....2333
HORIE, T. The Syntheses of Centaureidin and 5,7,3′-Trihydroxy-3,8,4′-trimethoxyflavone.....2701
HORIE, T. See FUKUI, K., 1649. 2327.
HORIIKE, M. See INAMASU, S., 1393.
HOSAKA, H. See ANDO, T., 2013.
HOSAKA, K. The Isolation of the Two Isomers of Bis(L-aspartato)cobaltate(III) 277
HOSOGAI, T. See OKAZAKI, R., 3559. 3611.
HOSOMI, A. See SAKURAI, H., 1461.
HOSOYA, T. See TAKAYA, H., 2748.
HOTTA, H. The Isotope Effect of Hydrogen on the Autoxidation of Benzene and Toluene in Aqueous Solutions 2041
HOTTA, H. The Autoxidation of Ethylbenzene in the Presence of the Aqueous Phase 2413
HOTTA, H. The Effect of Organic Additives on the Autoxidation of Benzene and Toluene in the Aqueous Phase and the Kinetic Analysis.....3056
HOTTA, K. Liquid-phase Selectrive Hydrogenation of an Aliphatic α,β-Unsaturated Aldehyde over Raney Cobalt Catalyst Modified with Ferrous Chloride 1447
IBATA, T. See TAKEBAYASHI, M., 2938.
IBATA, T. See YUKAWA, Y. 802.
ICHIBA, S. Mössbauer Effect of ^{119}Sn in Molecular Complexes of Tin(IV) Chloride with Several Aromatic Compounds 1486
ICHIKAWA, H. Preparation and Properties of the Mixed Dinitro Complexes of Cobalt(III) with the Carbonato or Oxalato Ligand.....2873
ICHIKAWA, K. Acidity of Methine Hydrogen in Cyclopropyl Ketone—*Cis-Trans* Rearrangement of 1-Acetyl-2-phenylcyclopropane with Base 3045
ICHIKAWA, T. ESR Studies on the Reaction of an OH Radical in α,β-Unsaturated Aldehyde 2208
ICI ¹NOHE, Y. A New Alkaloid from *Acontium Sachalinense* Fr. Schmidt 3038
ICHINOHE, Y. The Reaction of Cholest-4-en-3β-ol (Allocholesterol) with the Dichlorobis(triphenylphosphine)platinum(II)-Stannous Chloride Complex 3614
IIDA, T. Contact Potential in Vacuum for Titanium Dioxide Powder 243
IIDA, T. The Photoconductivity of the Titanium Dioxide Crystal 929

IIDA, T. Electrophotographic Properties of Titanium Dioxide-resin Dispersion Layers 2820
IIDA, Y. Electronic Spectra of Crystalline TCNQ Anion Radical Salts. I 71
II 637
IIJIMA, K. The Molecular and Crystal Structure of Bis(2-hydroxyethyliminopyruvato)copper(II) Tetrahydrate 1509
IIJIMA, T. Zero-point Average Structure of Acetaldehyde 2159
IIJIMA, T. See KATO, C., 2148.
IIMURA, K. Infrared Study of the Conformational Equilibria of *meso*- and *racemic*-2,3-Dichlorobutanes 2091
IIMURA, K. Infrared Study of Rotational Isomers of *meso*- and *racemic*-2,3-Dibromobutane.....3135
IINO, M. Reaction of α-Phenethyl Radical in Liquid Sulfur Dioxide.....3001
IKAWA, S. Infrared Spectra of BF_3-NO Mixed Solids 1462
IKEDA, R. See ONDA, S., 1771. 2740.
IKEDA, S. See ITABASHI, E., 1901.
IKEDA, S. See SAKAI, R., 1332.
IKEDA, S. See YOKOYAMA, Y., 2254.
IKEGAMI, S. See KATO, M., 2555. 3039.
IKEMOTO, M. See NAKANISHI, T., 3600.
IKOMA, H. See TACHIBANA, T., 2180.
IKUTANI, Y. Studies of the *N*-Oxides of *N,N*-Dialkylamino Acids. II 2330
IMADO, S. See MIYOSHI, M., 1749.
IMAFUKU, K. Simple HMO Calculation of the Substituent Effects in Tropolone Derivatives 1772
IMAI, H. Spectrophotometric Determination of Iron(III) with Rhodamine B and Confirmation of the Composition of Its Complex 237
IMAI, H. Studies on Photo-polarography. II 1142
IV 578
IMAI, J. See OMORI, T., 2198.
IMAI, K. See KATO, M., 2555. 3039.
IMAIDA, M. See IZUMI, Y., 241. 2373.
IMAMURA, A. The Electronic Structures of Glycine in the Isolated State and in Water.....3118
IMAMURA, A. See FUJITA, H., 1467.
IMAMURA, M. See MATSUI, M., 3362.
IMAMURA, S. Organic Syntheses by Means of Nobel Metal Compounds. XXXVIII 805
IMANAKA, T. See KAWAMOTO, K., 2688.
IMOTO, M. See KUBUSHIRO, K., 3327.
IMOTO, E. See OTSUJI, Y., 732.
INAGAKI, M. Intensity Ratio between (00*l*) Diffraction Lines of a Coke and a Simple Model of Carbon Layer Plane 2371
INAGAKI, M. See KAMIYA, K., 1425.
INAGAKI, M. See NODA, T., 1738.
INAGAKI, M. See OZEKI, K., 3076.
INAKI, Y. Argentation Constants of Styrene Derivatives 2605
INAMASU, S. Solvent Effect in a Partial Asymmetric Synthesis. II 1393
INAMOTO, N. See OJIMA, I., 2975.
INAMOTO, N. See OKAZAKI, R., 3559. 3611.
INAZU, T. Preparation and Properties of Di-μ-alkoxo-bis(3-alkyl-5-methylsalicylaldehydato)dicopper(II) 2291
INAZU, T., See INAZU, T., 2291.
INOKAWA, S. See KUMAMOTO, K., 3245.
INOKAWA, S. See TSUCHIYA, M., 1756.
INOKUCHI, H. See AIHARA, J., 1824.
INOKUCHI, H. See HIROOKA, T., 1481.
INOKUCHI, H. See KAJIWARA, T., 2734.
INOKUCHI, H. See OHIGASHI, N., 1212.
INOKUCHI, H, See SHIROTANI, I., 366. 2087. 2387.
INOUE, E. See KOBAYASHI, H., 2735.
INOUE, E, See SHIMIZU, I., 1726. 1730.
INOUE, M. See HARA, K., 576.
INOUE, T. See KAGIYA, T., 1812. 2422.
INOUE, T. See SATO, K., 250.
INOUE, Y. See SUZUKI, S., 1916. 2523.
INOUYE, K. Anomalous Viscosity of Bitumen Solutions and the Agglomeration of "Molecules" .. 308
INOUYE, Y. Total Syntheses of Tanshinone-I, Tanshinone-II and Cryptotanshinone.....3318
INOUYE, Y. See INAMASU, S., 1393.
INOUYE, Y. See MUROI, M., 2948.
INOUYE, Y. See SAWADA, S., 2669.
INUKAI, K. See MURAMATSU, H., 1155.
INUKAI, K. See UEDA, T., 1684.
INUKAI, T. See YOSHIZAWA, R., 3238.
INUTA, S. See HINE, F., 914.
IRIE, T. Isolation of Aplysin, Debromoaplysin, and Aplysinol from *Laurencia Okamurai* Yamada.... 843
IRIE, T. See CHIHARA, H., 3034.
IRIE, T. See MORI, N., 482.
IRIE, T. See SUZUKI, M., 3342.
ISAGAWA, K. The Rearrangement of 2-Aminobenzophenones 2066
ISEMURA, T. See SAKAI, R., 1332. 1337. 3028.
ISHIBE, N. See YOSHIDA, Z., 3254, 3259, 3263.
ISHIDA, K. Stochastic Model for Langmuir Isotherm 563
ISHIDA, K. Stochastic Model for Autocatalytic Reaction 564
ISHIDA, K. Nonequilibrium Thermodynamics of the Relaxing System Subject to Multinomial Distribution 1493
ISHIDA, R. The Spectrophotometric Determination of Palladium with Chromazurol S.....1011
ISHIDA, S. See TARAMA, K., 1161.
ISHIHARA, F. See TSUCHIYA, S., 847.
ISHII, H. Determination of Traces of Constituents with Schiff Bases. III 1558
ISHII, T. See SASAKI, T., 558.
ISHIMARU T. See SAKURAI, H., 3524.
ISHIMORI, T. See MIKI, E., 3007. 3050.
ISHIMOTO, S. See CHUBACHI, S., 789.
ISHIUCHI, Y. See MAKI, N., 3166.
ISHIWAKA, T. See ISAGAWA, K., 2066.
ISHIWARI, S. See YOSHIMORI, T., 1282.
ISHIYAMA, T. A Complex Formed by the Reaction of Ruthenium Tetroxide with 1,10-Phenanthroline in Carbon Tetrachloride.....2071
ISHIZAWA, A. See WATANABE, A., 1360.
ISHIZU, K. ESR Studies of the Negative Ions of Biphenyl Derivatives. III. 2808
ISOBE, C. See MINATO, H., 779.
ISOBE, T. See MISUMI, S., 3433.
ISOBE, T. See YOKOI, H., 2085. 2187. 2232.
ISODA, K. See HOTTA, H., 3056.
ITABASHI, E. Polarographic Reduction of Cobalt(II) in Acetonitrile in the Presence of Acetate Ions..1901
ITAKURA, J. Epoxidation of Eight- and Twelve-Membered Cyclic Olefins with Hydrogen Peroxide in the Presence of Metal Oxide Catalysts ..1604

ITO, H. Absorption Spectra and Circular Dichroisms of Metal Complexes. III 1286
IV 2863
ITO, H. Vacuum-ultraviolet Absorption Spectra of Aliphatic Ketones 2453
ITO, H. See ITAKURA, J., 1604.
ITO, H. See UMEGAKI, T., 1555. 2364.
ITO, H. See YANO S., 3184.
ITO, K. A Simple Treatment for the Kinetics of Radical Polymerization with Primary Radical Termination 1758
ITO, K. See YAMAMOTO, Y., 984.
ITŌ, K. See NAKANISHI, T., 3600.
ITO, M. See AZUMI, T., 685.
ITO, M. See HASEGAWA, Y., 840.
ITO, M. See HOTTA, H., 2413.
ITO, O. See HATANO, M., 1780.
ITŌ, S. See TAKESHITA, H., 2068.
ITO, T. Deuteron Magnetic Resonance Study in $CO(ND_3)_6Cl_3$.....108
ITO, T. Electronic Structure of Tris(1,10-phenanthroline)iron(II) Complex..... 702
ITO, T. See IWASE, A., 2064.
ITO, T. See SATO, M., 1976.
ITO, Y. See SAEGUSA, T., 2610. 3310. 3535.
ITOH, K. See FURUYA, Y., 1769. 1922. 2348.
ITOH, M. Gamma-Ray-Induced Addition of Formamide and Aniline to Crotonic Acid and Its Ester 3340
ITOH, N. See OKADA, I., 547.
ITOH, O. See ICHIKAWA, K., 3045.
ITOH, T. See OGATA, Y., 794.
IWACHIDA, T. See MOTOMIZU, S., 1006. 2074.
IWADARE, E. See OKAZAKI, R., 3611.
IWADARE, S. See YAMAMURA, S., 1776.
IWAKAWA, M. See FUNABASHI, M., 2885.
IWAKI, R. Chemiluminescent Reaction between Polyphenols and Ozone in Acetic Acid 855
IWAKI, T. See MIURA, M., 1476.
IWAKURA, H. See ŌKI, M., 1986.
IWAKURA, Y. Reactive Fiber. VII 741
IWAKURA, Y. Radical Copolymerization of Glycidyl Dienecarboxylates with Styrene 837
IWAKURA, Y. Formation of 3-Butenoates from Crotonyl Chloride in the Presence of Amines .. 841
IWAKURA, Y. Configuration of 1,3-Dipolar Cycloaddition Products of Nitrones with *N*-Phenylmaleimide.....2882
IWANAGA, C. See USUI, Y., 1231.
IWANO, H. The Rate of Penetration of Photographic Chemicals into Gelatin Layers. I 2677
IWASAKI, K. See YAMADA, S., 131. 1463.
IWASE, A. The Influence of Lanthanide Ions on the Polarographic Minima of Peroxodisulfate Ions 2064
IWASE, A. Oscillopolarographic Behaviour of Lanthanide Ions at the Dropping and Hanging-drop Mercury Electrodes 2243
IWASE, A. Oscillopolarographic Behaviour of Lanthanide Ions in Potassium Iodide Solutions....3155
IWASHIMA, S. See KAJIWARA, T., 2734.
IWATA, R. See IWAKURA, Y., 837. 841.
IWATA, M. See SUGIYAMA, N., 1377.
IZAWA, M. See KAWAMURA, S., 3003.
IZAWA, Y. OGATA, Y., 794.
IZUMI, T. See KASAHARA, A., 1702. 1765.
IZUMI, Y. Asymmetric Hydrogenation of C=O Double Bond with Modified Raney Nickel. XI 241
XII 2373
IZUMIYA, N. See AOYAGI, H., 782.
IZUMIYA, N. See OKAI, H., 3550.
IZUTSU, K. See FUJINAGA, T., 140.
JACKMAN, J. M. Studies in Nuclear Magnetic Resonance Spectroscopy. Long-range Shielding by Triple Bonds 1179
JAIN, B. D. See ANAND, S. K., 554.
JAIN, B. D. See ANAND, S. P., 3459.
JAIN, S. K. See PRAKASH, S., 289.
JAIN, S. P. Mechanism of Emulsification with Special Reference to Solid Stabilized Emulsions....1171
JAVAID, K. A. Selenium Dioxide Oxidation of Styrene and Norbornene 2056
JAYSWAL, M. G. See SINGH, S. N., 2048.
JOKO, E. See KOTERA, A., 3093.
JONASSEN, H. B. See KATO, M., 2555. 3039.
JONASSEN, H. B. See MUTO, Y., 417.
KAERIYAMA, K. Graft Copolymerization onto Cellulose in Dimethyl Sulfoxide by Means of a Ceric Salt Containing Lauryl Sulfuric Ions.....1342
KAERIYAMA, K. Polymerization of Methyl Methacrylate by Amide-Carbon Tetrachloride System 3602
KAGIYA, T. A Study of the Solvent Effect on the Polymerization of *N*-Phenylethyleneimine.....1094
KAGIYA, T. A Study of the Solvent Effect in the Copolymerization of *N*-Phenylethylenimine with β-Propiolactone 1628
KAGIYA, T. Effect of the Binary Solvent System on the Copolymerization of *N*-Phenylethylenimine with β-Propiolactone 1634
KAGIYA, T. Polymerization of Formaldehyde in Liquid Carbon Dioxide. I 1688
KAGIYA, T. Evaluation of the Activation Energies of Radical Substitution Reactions in the Gaseous Phase. I 1812
II.....2422
KAGIYA, T. Kinetic Features of the Redox-polymerization of Acrolein with the Potassium Persulfate-Silver Nitrate System 2578
KAGIYA, T. Graphical Evaluation of the Rate Constants of the Elementary Reactions in the Acrolein Polymerization with the Potassium Persulfate - Silver Nitrate Redox System 2583
KAGIYA, T. A Structural Study of the Catalytic Activity in Formaldehyde Polymerization in Liquid Carbon Dioxide 2912
KAGIYA, T. Crystalline Terpolymer of Formaldehyde, Carbon Dioxide and *N*-Phenylethylenimine 3211
KAGIYA, T. Structural Study of the Catalytic Activity of Alkyl Chloride in the Polymerization of *N*-Phenylethylenimine 3514
KAGIYA, T. Mechanism of the Solvent Effect in a Binary Solvent System on the Cationic Polymerization of *N*-Phenylethylenimine 3519
KAGIYA,T. See HAGIWARA, M., 3380.
KAGIYA, T. See YOKOTA, H., 1412. 2343.
KAI, F. The Reaction between Mercury(II) and Organic Compounds. VII 2250

KAINOSHO, M. Conformational Dependence of P=O Stretching Vibration Frequency in Six-membered Cyclic Phosphates 845
KAINOSHO, M. Phosphorus-proton Spin-spin Coupling in the P–O–C–H Group. A Comparison of Cyclic and Acyclic Systems 1713
KAINOSHO, M. See MURAYAMA, W., 1819.
KAIZAKI, S. Circular Dichroism of Chromium(III) Complexes. I 988
KAIZU, Y. See HASEGAWA, Y., 840.
KAIZU, Y. See TORII, Y., 2264.
KAJI, E. See KINOSHITA, M., 194.
KAJI, Y. See TSUCHIYA, R., 1881.
KAJIMOTO, T. Organic Syntheses by Means of Metal Complexes. IV 827
KAJIMOTO, T. See IMAMURA, S., 805.
KAJIURA, T. See TSUBOI, M., 1871.
KAJIWARA, T. Fluorescence Spectra of High-purity Coronene Thin Film 2734
KAJIWARA, T. See SHIROTANI, I., 366. 2387.
KAJIYAMA, K. See YUKI, H., 3546.
KAKIHANA, H. Effect of the Deuterium Atom Fraction on the Stability Constant of the Main Hydrolysis Product of the Beryllium Ion 1458
KAKIHANA, H. See KOJIMA, Y., 875.
KAKIMOTO, S. Antituberclous Compounds. XXVII 2996
KAKISAWA, H. See INOUYE, Y., 3318.
KAKIUCHI, E. See KONDO, S., 2050.
KAKUDO, M. See KIMURA, T., 2479.
KAKUDO, M. See MATSUURA, Y., 881.
KAKUDO, M. See SAKANOUE, S., 2407. 2408.
KAKUDO, M. See TANAKA, N., 1546.
KAKUDO, M. See YASUOKA, N., 91.
KAMADA, H. See SUZUKI, M., 323.
KAMBARA, H. See TACHIBANA, T., 3422.
KAMEDA, N. See ICHINOHE, Y., 3614.
KAMIYA, I. See IWAKI, R., 855.
KAMIYA, K. Effect of Pressure on Graphitization of Carbon. VI 1425
KAMIYA, Y. See NIKI, E., 512. 2312. 3220. 3224. 3578.
KAMMORI, Ō. See SATO, K., 2778. 3593.
KAMO, M. Preparation of Cyclic Phosphates of Uranium(VI) 3616
KANATOMI, H. Reaction of Salicylamine with α-Dicarbonyl Compounds. I 1329
KANCHIKU, Y. Separation and Identification of Chlorocomplexes of Technetium(V) formed in Hydrochloric Acid Solutions 2831
KANDA, Y. See NAKAHARA, A., 3073.
KANEDA, A. See SUDO, R., 1380.
KANETA, M. The Structure of a New Flavone, "Arthraxin" 2084
KANNO, H. See SAITO, N., 2409.
KANO, T. See AKIBA, K., 2537.
KASAHARA, A. A New σ-Bonded Complex Formation between 2-Vinylpyridine and Palladium(II) or Platinum(II) Chloride 1702
KASAHARA, A. σ-Bonded Arylpalladium(II) Complex: Bis-[*N,N*-dimethylbenzylamine-2-*C,N*]-palladium 1765
KASAI, N. See KIMURA, T., 2479.
KASAI, N. See MATSUURA, Y., 881.
KASAI, N. See SAKANOUE, S., 2407. 2408.
KASAI, N. See MASUOKA, N., 91.
KASAI, T. See MATSUMURA, K., 1741.
KASHIMA, C. A New Synthetic Method of 4(1*H*)-Pyridones 2389
KASHIMA, C. Photoisomerization of 1,2-Diphenyl-6-methyl-2,3-dihydro-4-pyridone 3596
KASHIMA, C. See SUGIYAMA, N., 1098. 1353. 1357. 2690. 3005.
KASHIMA, J. Gas Chromatographic Determination of Nitrogen in Metals by Means of Inert Gas Fusion Using Silicon 542
KATAGIRI, K. See ENDO, H., 502. 506. 566.
KATAOKA, H. See SUGIYAMA, N., 1098. 1153. 1353, 3005.
KATAYAMA, M. Pulse Radiolysis with Electric Conductivity. A Method of Obtaining the Rates of Propagation in the Radiation-induced Polymerization of α-Methylstyrene.....2410
KATAYAMA, N. See MORIMOTO, T., 1490.
KATIYAR, R. S. See KRISHNAN, R. S., 2098.
KATO, A. See SAKURAI, K., 2725.
KATO, C. Electron Diffraction Studies of Formaldehyde, Acetaldehyde and Acetone.....2148
KATO, H. Semi-Empirical ASMO SCF Method for the Valence Electron System. The Electronic Structures of Protonated Pyridinium and Diazinium Cations 923
KATO, H. See YONEZAWA, T., 76. 933. 1248. 2323. 2437.
KATŌ, H. See KATO, H., 923.
KATO, M. Shielding Effect of *Ortho*-Substituents on Magnetic Moments and d–d Bands in Chloro-*N*-phenylsalicylideneiminatocopper(II) 2555
KATO, M. Bi- and Tri-Nuclear Copper(II) Complexes Derived from Bi- and Tetra-dentate Schiff-base Complexes 3039
KATO, M., See MUTO, Y., 417.
KATO, M. See OKAMOTO, Y., 760.
KATO, S. See MORITA, M., 25.
KATO, S. See OHNO, T., 3385.
KATO, T. Studies of Japanese Lacquer: Isolation of a Diphenyl Dimer of Urushiol.....2375
KATO, T. See AOYAGI, H., 782.
KATO, T. See OKA, Y., 387. 981.
KATO, T. See TSUZUKI, Y., 1052.
KATO, T. See YOSHIKAWA, M., 3505.
KATSUHARA, J. The Epoxidation of α,β-Unsaturated Terpene Ketones 2391
KATSUHARA, J. The Absolute Configuration of Isopropylidenecamphor Oxide 2593
KATSUKI, K. See KATO, M., 2555. 3039.
KAWABE, H. Bipolar Ion-Exchange Membranes Prepared from Blends of Graft Copolymers....1029
KAWABE, H. Group Interactions in Polyelectrolytes. II 3109
KAWAGUCHI, H. Trimethylenediamine Complexes. I 136
KAWAGUCHI, S. See KAWAGUCHI, H., 136.
KAWAGUCHI, S. See OGURA, T., 643.
KAWAGUCHI, S. See TEZUKA, Y., 443.
KAWAI, I. The Indirect Determination of Mercury in an Aqueous Solution using the Ligand Exchange Reaction.....3466
KAWAI, K. The Formation of Transient Aromatic Ions in Solutions by the Flash Illumination 369
KAWAI, K. Infrared Spectra of Bis(2,4-dichloro-6-ethoxymercaptoisocyano-*s*-triazino-*N,S*)Copper-(II) 2396

KAWAI, M. See ISAGAWA, K., 2066.
KAWAI, M. See TSUDA, S., 607, 614. 1515. 2514. 3115.
KAWAKAMI, N. See IIMURA, K., 2091.
KAWAMOTO, K. The Reaction between Hydrocarbon and Hydrogen Cyanide in Silent Electrical Discharge. III 1105
KAWAMOTO, K. Reaction Intermediate in the Dimerization of Ethylene Catalyzed by a Palladium(II) Complex. NMR Spectral Evidence for the Formation of the π-Bonded Chloroacetylacetonato(1-butane)palladium(II) Complex 2688
KAWAMURA, S. Preparation and Ion-exchange Behavior of Potassium Zinc Ferrocyanide 3003
KAWAMURA, T. See YONEZAWA, T., 650. 2437.
KAWANA, M. Synthesis of Pyrrole Nucleosides by the Photo-dehydrogenation of Δ^3-Pyrroline Derivatives 3539
KAWANISI, M. See OKADA, T., 2981.
KAWAOKA, H. See NAKAI, T., 508.
KAWASAKI, A. See TANIGUCHI, M., 2728.
KAWASHIMA, H. Studies of Purine 3-*N*-Oxides. III .. 750
KAZAMA, S. See KUMANOTANI, J., 1130.
KHIM, Y. H. The Mechanism of the Alkaline Decomposition of Triarylsulfonium Bromide with Phenyllithium 1968
KHIM, Y. H. See OAE, S., 1622. 3528.
KIBA, T. See AKAZA, I., 1291.
KIDA, S. See MISUMI, S., 3433.
KIJIMA, I. See ABE, Y., 1118. 1148. 2570.
KIKUCHI, O. Molecular Orbital Treatment of Nitric Oxide Radicals. I 47
II 1187
III 1472
KIKUCHI, S. See SATO, K., 250.
KIKUKAWA, K. Reaction of Sulfides with *t*-Butyl Hypochlorite in the Presence of Water ^{18}O Tracer Study 831
KIM, P. H. See TAKI, K., 823. 2377.
KIMOTO, H. See MURAMATSU, H., 1155.
KIMOTO, M. See MAEDA, T., 1668. 2021.
KIMURA, H. See OBARA, H., 2705.
KIMURA, K. Electronic Absorption Spectra of Cation Radicals of *o*-Dialkoxybenzenes in Concentrated Sulfuric Acid 3032
KIMURA, K. See ARIMITSU, S., 1858.
KIMURA, K. See NAKANISHI, T., 3600.
KIMURA, K. See TOSHIYASU, Y., 1878.
KIMURA, M. The Effect of Acetate Ion the Rate of the Reaction between Cobalt(II) and Manganese-(II)-Ethylenediaminetetraacetate Complexes 404
KIMURA, M. The Effect of Phthalate Ion and Acetate Ion on the Rate of the Reaction between Nickel(II) and Cobalt(II)-Nitrilotriacetate Complexes 407
KIMURA, M. The Kinetics of the Ligand-substitution Reactions of Nitrilotriacetatoniccolate(II) Complexes with *trans*-1,2-Cyclohexanediaminetetraacetate Ions 2841
KIMURA, M. The Kinetics of the Ligand-substitution Reactions of Nitrilo(diacetic)-propionato- and Nitrilo(diacetic)isopropionatoniccolate(II) Ions with EDTA, and of Taurin-*N*-diacetatoniccolate-(II) Ions with EDTA and CyDTA 2844
KIMURA, M. The Kinetics of the Ligand Substitution Reaction of Copper(II)-nitrilotriacetate and -nitrilo(diacetic)propionate Complexes with *trans*-1,2-Cyclohexanediaminetetraacetate Ions 3588
KIMURA, M. See KATO, C., 2148. 2159.
KIMURA, T. The Crystal and Molecular Structure of the High-melting-point Isomer of Bis-(1,2-diethoxycarbonyl-ethyl)tin Dibromide 2479
KIMURA, T. Radiolysis of Methylcyclohexane. II 3088
KIMURA, T. See WAKAYAMA, T., 266.
KIMURA, Y. See KODAMA, H., 681.
KINOSHITA, M. The Synthesis of Cyclic α-Amino Acids. II 194
KINOSHITA, M. The Total Synthesis of Dehexyldeisovaleryloxy-antimycin A_1 854
KINOSHITA, M. See OHMASA, M., 2402.
KINOSHITA, M. See SATO, Y., 548. 3051.
KINOSHITA, M. See YANAGISAWA, H., 1719.
KIRA, A. Photochemistry of Acridine and Acridan. Two Isomeric Forms of Acridine Semiquinone 625
KIDA, A. See SHIDA, T., 1197.
KISE, H. See ASAHARA, T., 1065.
KISHI, H. KODERA, K., 3124.
KISHIDA, S. Poisoning Effect of Carbon Disulfide on the Liquid-phase Hydrogenation of Acetone over a Raney-Nickel Catalyst 270
KISHIKAWA, T. See SHINOMIYA, C., 1437. 2040, 2356.
KISHITA, M. See HARA, K., 576.
KITA, S. Mechanism of a Stereospecific, Photosensitized, Cyclization Reaction of 3-Methylene-1,5-heptadiene 66
KITA, Y. See KODERA, K., 3124.
KITAGAWA, S. See SAEGUSA, T., 228.
KITAGAWA, T. Group Theoretical Treatment of Crystal Vibrations; Application to Orthorhombic Polyethylene 3437
KITAHARA, Y. See ODA, M., 2386.
KITANO, Y. See IMAMURA, S., 805.
KIYOHARA, O. Dipole Moments of 1,2-Dihalogeno- and 1,1,2,2-Tetrahalogenoethanes in Aromatic and Non-Aromatic Solvents 1158
KIYOI, R. See KOBAYASHI, A., 3491.
KIYOKAWA, M. See MAEDA, T., 492.
KIYOURA, T. See SHIBATA, K., 871.
KOBAYASHI, A. Oxytocin Analogues Containing No Disulfide Bond. I 3491
KOBAYASHI, H. Spectroscopy and Magnetic Properties of Nitrosylpentaamminechromium Salts 799
KOBAYASHI, H. The Photochromism of Evaporated Photospiran 2735
KOBAYASHI, H. See MATSUMOTO, S., 960.
KOBAYASHI, H. See TORII, Y., 2264.
KOBAYASHI, M. Photochemical Benzoyloxylation with Labeled Benzoyl Peroxide 2737
KOBAYASHI, M. Primary Kinetic Isotope Effect for Phenylation wtih Phenyl Radical 2738
KOBAYASHI, S. See KASHIMA, C., 2389.
KOBAYASHI, S. See SAEGUSA, T., 2610. 3310. 3535.
KOBAYASHI, T. See MORITA, K., 2732.
KOBORI, N. See KOBAYASHI, M., 2738.
KOCHI, M. See HIROOKA, T., 1481.
KODA, S. See MISONO, A., 580. 3048. 3470.
KODAMA, H. Electrical Conductance of Molten Salt Systems: Ag_2O-B_2O_3 and Ag_2O-Na_2O-B_2O_3 681

KODAMA, M. Polarographic Study of Copper(II)-*N*-(2-Hydroxyethyl)ethylenediamine-*N,N,N'*-triacetate and -2,2'-Ethylenedioxybis[ethyliminodi(acetate)] Chelates 394
KODAMA, M. Spectrophotometric Determination of a Trace Amount of Cobalt(II) in Nickel(II) Solution 555
KODAMA, M. Polarographic Study of Thallium(I) Chelates of 2,2'-Ethylenedioxybis[ethyliminodi(acetic acid)] and Cyclohexane-1,2-diamine-*N,N,N',N'*-tetraacetic Acid 721
KODAMA, M. Polarographic Studies of Copper(II) Chelates of Ethylenediamine-*N,N,N',N'*-tetrapropionic Acid and Diethylenetriaminepentaacetic Acid 724
KODAMA, M. Kinetics of Multidentate Ligand Substitution Reactions. IV 163
V 833
KODAMA, M. The Complexation Reaction of 1-(Hydroxy-4-methyl-2-phenylazo)-2-naphthol-4-sulfonic Acid (Calmagite) with Divalent Metal Ions and Use as a Mettallochromic Indicator.. 835
KODAMA, M. Spectrophotometric Study of Solution Equilibria between Ammonia and Copper(II) and Nickel(II) Chelates of Aminopolycarboxylic Acids 1596
KODAMA, M. Polarographic Study of the Cadmium(II)-Ethylenediaminetetrapropionate Chelate 2267
KODAMA, M. Kinetics of Multidentate Ligand Substitution Reactions. VI 2532
VII 3330
KODAMA, M. Application of a Mercury-Coated Platinum Electrode to the A. C. Stripping Analysis of a Trace Amount of Metal Ions.... 2699
KODAMA, M. See FUJII, Y., 3330.
KODAMA, Y. See KAWAI, K., 2396.
KODAMA, Y. See OAE, S., 1110.
KODERA, K. Dissociation Pressure of Ferric Oxide 3036
KODERA, K. Effect of Halogens and Oxygen on the Emission of Thermal Positive Ions from the Tungsten Surface 3124
KOEZUKA, J. See TACHIBANA, T., 2180.
KOGA, Y. See USAMI, S., 2961.
KOHAMA, T. See MIYAZAKI, T., 894.
KOHARA, H. See TAKEBAYASHI, M., 2938.
KOHARA, K. On the Oxidation of Guaiazulene.. 3229
KOHNO, T. See NAKAHARA, A., 573.
KOIKE, W. See HASHIMOTO, S., 2733.
KOIKE, Y. See SEKINE, T., 432.
KOIKE, Y. See YANO, S., 3184.
KOINE, N. Preparation and Circular Dichroism of *trans(N)*- and *cis(N)*-Isomers of (Ammoniatriacetato)(aminoacidato)cobalt(III) Complexes 1583
KOINE, N. Additivity of Vicinal Circular Dichroism Contributions from Different Ligands in a Cobalt(III) Complex without Configurational Chirality 1779
KOIZUMI, M. See KIRA, A., 625.
KOIZUMI, M. See KOWATA, T., 3352.
KOIZUMI, M. See NAKAMARU, K., 255.
KOIZUMI, M. See NEMOTO, M., 1223. 2464.
KOIZUMI, M. See USUI, Y., 1231.
KOIZUMI, T. See OHNO, A., 3556.
KOJIMA, T. Extraction of Hydrochloric Acid by Tris-*n*-octylamine in Benzene 875
KOKADO, H. See KOBAYASHI, H., 2735.
KOKADO, H. See SHIMIZU, I., 1726. 1730.
KOKUBO, I. See TOKIWA, F., 575.
KOKUBUN, H. Fluorescence Lifetime of Acridine in Water-Organic Solvent Mixtures 919
KOKUBUN, H. See NEMOTO, M., 1223. 2464.
KOMATSU, K. See OKAMOTO, K., 3249.
KOMIYAMA, Y. See IIJIMA, K., 1509.
KOMIYAMA, Y. See OONISHI, I., 2791.
KOMORI, T. See HOTTA, H., 2041.
KOMORITA, T. Metal Complexes with Amino Acid Amides. II 168
KOMORITA, T. Circular Dichroism of the Square Planar Nickel(II) Complexes of $[Ni(N)_4]$ Type with L-Amino Acid Amides 1782
KONAKA, S. See KATO, C., 2148.
KONDO, I. See SUEMITSU, R., 2368.
KONDO, M. Fluorescence Spectra of Some Benzimidazoles in Acid Media 1433
KONDO, M. See KAGIYA, T., 1688. 3211.
KONDO, M. See KATO, M., 3039.
KONDO, M. See OGURA, H., 1763.
KONDO, M. See YOKOTA, H., 1412.
KONDO, S. The Surface Structure of Silica Gel Studied by Dielectric Dispersion 1165
KONDO, S. Nuclear Quadrupole Resonance of α-Dimethyltellurium Dichloride 2050
KONDO, S. See MUROYA, M., 2724.
KONDO, T. See KAGIYA, T., 1094. 1628. 1634. 3514. 3519.
KONDO, T. See USAMI, S., 2961.
KONDO, Y. Solvent Effects on ρ Values of the Hammett Equation 1037
KONDO, Y. Solvent Effect under High Pressure. III. 1660
KONDO, Y. Reaction Rates in Binary Mixed Solvents. V 1708
KONDO, Y. See HAYAKAWA, G., 479, 1937.
KONISHI, H. See KATO, H., 923.
KONISHI, H. See YONEZAWA, T., 933.
KONO, H. Nitroalkenylferrocene. III 3267
IV 3270
KONO, H. β-Ferrocenyl-α,β-unsaturated Ketones. I 3273
KONO, H. See SHIGA, M., 798.
KONO, M. See OHGO, Y., 2957.
KOSAKI, A. Thermodynamic Properties of Galvinoxyl Radical and Its Phenol Derivative; Mechanism of the Phase Transition 1525
KOSAKA, M. See WATANABE, A., 1360.
KOSHIBA, K. See NOZAKI, T., 245.
KOSUGI, M. Homolytic Chlorination of Aliphatic Compounds. II 3242
III 3354
KOSUGI, Y. See OGATA, Y., 2282.
KOTAKE, H. An Improved Synthesis of *N*,β-Dimethylleucine and the Resolution Thereof 1367
KOTAKE, M. See KUSUMOTO, S., 812.
KOTAKE, M. See NAYA, 1468. 2088. 2405.
KOTERA, A. A Study of the Properties of Dilute Polymer Solutions by the Archibald Ultracentrifugal Method 3093
KOTERA, K. See MIYOSHI, M., 1749.
KOTO, S. See UMEZAWA, S., 529. 533. 537.
KOWATA, T. Disproportionation of Dimethyl *p*-Pthalate Anion Radical Paired with Alkali Metal Cation 3352

KOYA, K. See MISUMI, S., 2403.
KOYAMA, M. See TSUZUKI, Y., 1052.
KOYAMA, S. See SOTOBAYASHI, T., 716.
KOYAMA, T. See USAMI, S., 2966.
KOYANAGI, M. See NAKAHARA, A., 3073.
KOYANO, K. Effects of the Nitrone Group in Spectra of α,*N*-Diphenylnitrones 3306
KOZAI, H. See SEIMIYA, T., 2797.
KOZIMA, K. See OGATA, T., 1263.
KOZIMA, K. See SUZUKI, M., 2183.
KRISHNAN, R. S. Raman and Infrared Spectra of *β*-Alanine 2098
KUBO, I. See KUBOTA, T., 1778.
KUBO, K. See ISHIZU, K., 2808.
KUBO, M. See HARA, K., 576.
KUBO, M. See ONDA, S., 1771. 2740.
KUBO, Y. Synthetic Hydrogen-containing Ultramarine Phases 1897
KUBOMATSU, T. See HOTTA, K., 1447.
KUBOTA, T. The Two Bitter Principles of *Isodon shikokianus* Kudo 1778
KUBOTA, Y. Delayed Fluorescence of the DNA-Acridine Dye Complexes in a Frozen Aqueous Solution 853
KUBOTA, Y. The Excited States of Acridine Dyes. I 2763
KUBOTA, Y. See MIURA, M., 1476.
KUBOYAMA, A. The n–π^* Bands of Phenyl Carbonyl Compounds, α-Diketones, and Quinones at Low Temperatures 10
KUBOYAMA, A. See ITO, H., 2453.
KUBUSHIRO, K. Vinyl Polymerization. 239 3327
KUCHITSU, K. See FUKUYAMA, T., 379.
KUCHITSU, K. See TANIMOTO, M., 2519.
KUDO, H. See SHIOKAWA, T., 436.
KUGE, Y. The Syntheses and the Structure of Triethanolamine Complexes with Cobalt(II) and Nickel(II) 2552
KUGE, Y. See YAMADA, S., 152.
KUJIRAI, M. See ICHINOHE, Y., 3614.
KUMADA, M. See SAKURAI, H., 1461.
KUMAMARU, T. Determination of Small a Amount of Iodide by Atomic Absorption Spectrophotometry Using a Cadmium Hollow Cathode Lamp 956
KUMAMARU, T. See YAMAMOTO, Y., 1774.
KUMAMOTO, K. Sugars Containing a Carbon-phosphorus Bond. I 3324
KUMAMOTO, S. See SOMEKAWA, K., 3499.
KUMANOMIDO, H. Studies of the Precipitation of Humic Acid by Cationic Polyelectrolytes 20
KUMANOTANI, J. Amino-quinoid Polymeric System. The Preparation of a Polyester Containing 2,5-Diamino-*p*-benzoquinone Nuclei and Its Cross-linking 1130
KUMANOTANI, J. See KATO, T., 2375.
KUMANOTANI, J. See SUGITA, K., 2043. 2695.
KUMAR, K. Investigations on the Kinetics and Mechanism of the Reduction of Mercuric Chloride by Malic Acid, induced by Potassium Peroxodisulphate 3141
KUMASHIRO, I. See KAWASHIMA, H., 750.
KUMASHIRO, I. See YAMADA, Y., 1454.
KUNICHIKA, S. The Synthesis of Methylacetylene by the Pyrolysis of Propylene. IV 1082
KUNIEDA, N. Oxygen Exchange Reaction of Sulfoxides in Dinitrogen Tetroxide 1090
KUNIEDA, N. Kinetic Studies of Oxygen Exchange and Racemization Reactions of Diaryl Sulfoxides in Sulfuric Acid of Various Concentrations....1324
KUNIEDA, N. See KIKUKAWA, K., 831.
KUNIEDA, N. See OAE, S., 1964.
KURABAYASHI, M. See SHIBUYA, I., 2382.
KURAHASHI, M. The Crystal and Molecular Structure of Carbazole 2174
KURI, Z. See KIMURA, T., 3088.
KURI, Z. See MIYAZAKI, T., 894. 2086.
KURI, Z. See NODA, S., 16.
KURI, Z. See WAKAYAMA, T., 266. 1164
KURIHARA, A. See SEKIGUCHI, S., 1453.
KURIMURA, Y. The Kinetics of the Autoxidation of Ferrous Ions in Aqueous Tripolyphosphate Solutions 2238
KURIMURA, Y. Copper(II)-catalyzed Oxidation of Iron(II) by Molecular Oxygen in Tripolyphosphate Solution 2715
KURIMURA, H. See KURIMURA, Y., 2238.
KURODA, H. See AMANO, T., 671.
KURODA, H. See SAKANOUE, S., 2407.
KURODA, K. See NISHIKAWA, M., 116. 1783.
KUROKAWA, S. See HAYASHI, S., 1404.
KUROKI, N. See MITSUISHI, M., 2384.
KUROSAWA, F. See SATO, K., 3593.
KUROSAWA, K. Manganic Acetate Oxidation of 2′-Hydroxychalcones 1456
KUROTAKI, K. See KAWAMURA, S., 3003.
KURUSU, T. See TAGAKI, W., 2894.
KUSABAYASHI, S. See SAKANOUE, S., 2407. 2408.
KUSABAYASHI, S. See SANO, T., 2505.
KUSABAYASHI, S. See TANIKAWA, K., 2406.
KUSAKA, T. See KONDO, Y., 1708.
KUSAKAWA, H. Space Effects of Tetra-*n*-alkyl Ammonium Ions on the Electrical Conduction of Tetracyanoquinodimethane Salts..... 263
KUSUDA, K. See SAKAN, T., 2952.
KUSUMOTO, K. See MIZUTANI, Y., 3324.
KUSUMOTO, S. The Structure and the Stereochemistry of Solidagonic Acid 812
KUSUNOKI, I. See KODERA, K., 3036. 3124.
KUWAMURA, T. Studies of the Derivatives of Epichlorohydrin. III 1345
KUWANO, H. See KONDO, M., 1433.
KUWATA, K. A Study on Electron Spin Resonance of the Complex between Metal Ions of Group II and *o*-Quinone Anion 864
KUWATA, K. See ICHIKAWA, T., 2208.
KWAN, T. See SAMEJIMA, H., 2722.
KYOGOKU, Y. Specific Association of Riboflavin and Adenine Derivatives in Chloroform Solution and the Effect of Barbiturates on the Association..1387
KYUNO, E. See FUJII, Y., 1301. 1569.
KYUNO, E. See TOMITA, T., 947.
KYUNO, E. See TSUCHIYA, R., 1881. 1886.
KYUNO, E. See UEHARA, A., 2835.
LAKHAN, R. See BHARGAVA, P. N., 1444.
LEPLEY, A. R. See GIUMANINI, A. G., 2359.
LIN, Y. See SATO, K., 2600.
MACHIDA, K. See UNO, T., 619. 897. 1539.
MAEDA, I. The Synthetic Intermediate of Pyridoxine. I 1435
MAEDA, K. Photochromic Color Change of the Dimer of Triphenylimidazolyl at Low Temperatures 3509

MAEDA, K. See SHIDA, T., 3043.
MAEDA, M. See KAKIHANA, H., 1458.
MAEDA, S. See IKAWA, S., 1462.
MAEDA, T. Ethylidenation of L-Sorbose 492
MAEDA, T. Benzylidenation of L-Sorbose.....1668
MAEDA, T. 1,3-*O*-Benzylidene-L-sorbose 2021
MAEDA, T. Conformational Studies of Acetonated α-L-Sorbo- and β-D-Fructopyranoses by Means of Proton Magnetic Resonance Spectroscopy..2635
MAEDA, T. The Acetalation Mechanism of L-Sorbose 2648
MAEDA, Y. See TAKASHIMA, Y., 1760.
MAEKAWA, T. Solubility of Ag_2O in Na_2O-B_2O_3 Melts..... 677
MAEKAWA, T. Optical Spectra of Transition Metals in Na_2O-P_2O_5 Glasses 2102
MAEKAWA, T. The Paramagnetism of Violanthrone-B 2361
MAEKAWA, T. Contribution of Charge Transfer-Structure to Exchange Interaction in the Crystal of Organic Free Radical 2362
MAKI, N. A Thiocyanato Cobalt(III) Complex: $[Co(SCN)_2dip_2]ClO_4 \cdot 2H_2O$ 579
MAKI, N. New Methods of Preparing the Mixed Cyano Cobalt(III) Complexes. 1908
MAKI, N. Methods of Preparing the 2,2′-Dipyridyl and 1,10-Phenanthroline Cobalt(III) Complexes of the $[CoX_2dip_2]$ and $[CoX_2phen_2]$-Type....2275
MAKI, N. Polarographic Study of Metal Complexes. VIII 3159
X 3166
MAKI, N. Polarography of the Dicyano Cobalt(III) Complexes 3617
MAKISHIMA, S. See MATSUDA, Y., 356.
MAKISUMI, S. See AOYAGI, H., 782.
MARUMO, F. See NOMURA, T., 1016.
MARUYAMA, K. Relative Rate of Hydrogen Abstraction by the Triplet State of Phenanthraquinone 3357
MARUYAMA, K. See ŌKUBO, M., 1162.
MASADA, H. See SUGA, S., 2920.
MASADA, H. See TAKEGAMI, Y., 202.
MASAI, M. Effects of the Addition of Chlorohydrocarbons on the Oxidation of Propylene; A Consideration of the Negative Temperature Coefficient 464
MASAI, M. See CHIGIRA, Y., 224. 228.
MASAKI, M. See SHIN, C. 191.
MASAMUNE, T. See SUGINOME, H., 215.
MASE, T. See CHINONE, A., 2310.
MASHIKO, Y. See ENOKIDO, H., 84. 3415.
MASUDA, I. Reactions of Nickel(II), Copper(II) and Palladium(II) Complexes of Bis(acetylacetone)ethylenediimine with Nitric Oxide 157
MASUDA, I. Deprotonation of Oxime Complexes: Dimethylglyoxime Cobalt(III) Complexes.....2296
MASUDA, I. See TAMAKI, M., 2858.
MASUDA, Y. Infrared Spectra and Molecular Conformations of Poly-γ-methyl-DL-glutamate..... 570
MASUI, Y. See ARAKAWA, H., 1452.
MASUKAWA, K. See MIYOSHI, M., 1749.
MATSUBARA, A. See MUKAI, T., 581.
MATSUBAYASHI, G. Stability Constants of Dimethyltin Dichloride and Tin Tetrachloride Complexes of *p*-Substituted Benzaldehydes, Acetophenones and *N*,*N*-Dimethylbenzamides 2369
MATSUDA, A. The Cobalt Carbonyl-catalyzed Hydroesterification of Methyl Acrylate with Carbon Monoxide and Methanol 571
MATSUDA, A. The Cobalt Carbonyl-catalyzed Hydroesterification of 3-(β-Cyanoethoxy)propene with Carbon Monoxide and Methanol.....2596
MATSUDA, H. See KOTERA, A., 3093.
MATSUDA, K. Long-term Integration of Polarographic Currents and Its Analytical Application 439
MATSUDA, S. See UCHIDA, A., 2989.
MATSUDA, T., See ITO, K., 1758.
MATSUDA, Y. Mechanism of Intramolecular Energy Transfer in Rare Earth Chelates as Revealed by Infrared Absorption Measurements..... 356
MATSUI, H. See CHUBACHI, S., 789.
MATSUI, K. See NOJIRI, T., 3362.
MATSUI, M. Acid Anhydride as an Electron Scavenger in the Radiolysis of Tetrahydrofuran..3362
MATSUI, M. See SHIGEMATSU, T., 976. 1278.
MATSUI, T. See KONDO, Y., 1037.
MATSUI, Y. See TAKEDA, A., 1047.
MATSUMOTO, A. Kinetic Study of the Polymerization of Diallyl Carbonate 1959
MATSUMOTO, M. See YONEZAWA, T., 2323.
MATSUMOTO, S. Some Thermal Properties of Metal Chelates of *o*-Acylphenols and of Their Ketimine Derivatives 960
MATSUMOTO, S. See SUZUKI, K., 2773.
MATSUMOTO, T. See FUKUI, K., 1398. 2380.
MATSUMURA, H. See IMAFUKU, K., 1772.
MATSUMURA, K. 3-[8′-Quinolinol-(5′)-yl]alanine Related Compounds 1741
MATSUMURA, K. Solution Properties of Poly-*m*-chlorostyrene 1874
MATSUMURA, S. See AOKI, S., 2574.
MATSUMURA, S. See MINESHITA, T., 594.
MATSUMURA, Y. See SHINDO, M., 265.
MATSUMURA, Y. See YONEZAWA, T., 2323.
MATSUNAGA, F. See SASAKI, T., 1308.
MATSUNAGA, Y. Orbital Electronegativities in Molecules and Ionic Character in Molecular Complexes 2170
MATSUNAGA, Y. The Size and Shape of the Component Molecules as the Factors Determining the Electronic Structure of Crystal Complexes....2490
MATSUO, T. Thermodynamic Properties and Phase Transitions of Thallous Cyanide Crystal.....1271
MATSUO, T. See SOMEKAWA, K., 3499.
MATSUOKA, J. See OHTA, H., 3019.
MATSUOKA, S. See MIZUTANI, Y., 3324.
MATSUSHITA, H. Two-dimensional Dual-band Thin-layer Chromatographic Separaion of Polynuclear Hydrocarbons 460
MATSUSHITA, S. See YAMAMOTO, Y., 1774.
MATSUURA, H. Optical and Acoustic Branches and Frequency Distribution of Polyethylene Glycol Chain 372
MATSUURA, N. See NISHIKAWA, M., 116. 1783.
MATSUURA, R. See SHIRAHAMA, K., 1206.
MATSUURA, T. Photoinduced Reactions. XXXIII 2970
XXXIV 2973
MATSUURA, T. See HAYASHI, S., 1404. 3026. 3591.
MATSUURA, T. See SHISHIBORI, T., 3284.

MATSUURA, Y. The Crystal and Molecular Structure of Bis-(*N,N'*-π-cyclopentadienylcobalt)-di-*tert*-butyl Urea, $(\pi\text{-}C_5H_5Co)_2(N\text{-}t\text{-}C_4H_9)_2CO$ 881
MATSUZAKI, S. See ITO, H., 2453.
MATUURA, R. See SATAKE, I., 319.
MATUURA, R. See SHIRAHAMA, K., 2123.
MATUURA, R. See TAHARA, T., 1201.
MIDO, Y. Infrared Absoprtion Spectra of Urea-formaldehyde Initial Condensation Products. II 3372
MIDORIKAWA, H. See BABA, H., 1653.
MIDORIKAWA, H. See SAKURAI, A., 220.
MIGITA, T. See KOSUGI, M., 3242. 3354.
MIICHI, Y. See MAEDA, T., 2648.
MIKAWA, H. See SAKANOUE, S., 2407. 2408.
MIKAWA, H. See SANO, T., 2505.
MIKAWA, H. See TANIKAWA, K., 2406.
MIKI, E. The Effects of Outer Sphere Cations and Halide Ions on Infrared Spectra of Pentahalogenonitrosylruthenium(III) Complexes 3007
MIKI, E. New Red-pentamminenitrosylcobalt(III) Complexes 3050
MINABE, M. See SUZUKI, K., 1609.
MINAMIDA, I. Solvent Effect in the Base-catalyzed Hydrogen Isotopic Exchange Reaction of α-Deuteriodiphenylthioacetal 3609
MINATO, H. Polymerization of Naphthalene and Reactions of Polynaphthalene 779
MINATO, H. Two-stage Polymerization of (1,3-Dioxolan-4-yl)methyl Acrylate.....1146
MINATO, H. See KOBAYASHI, M., 2737. 2738.
MINESHITA, T. The Flow Properties of γ-Polyglutamic Acid Solutions in Capillary 594
MINESHITA, T. See WATANABE, T., 583.
MINOMURA, S. See SHIROTANI, I., 2087.
MISAWA, T. Infrared Absorption Spectra and Oxidation of Iron(II) Hydroxide and Green Rust. I 3339
MISHIMA, M. See ICHIBA, S., 1486.
MISHIMA, M. See NEGITA, H., 2509.
MISONO, A. Reversible Oxygenation of Cobalt(II) Complexes on Polyvinylpyridine 580
MISONO, A. Oligomerization of Isoprene by Hafnium Catalysts 1383
MISONO, A. Oligomerization of Isoprene by Zirconium Catalysts.....2303
MISONO, A. An ESR Study of 1 : 1 Adducts of Bis-salicylaldehyde-imine-cobalt(II) Complexes with Oxygen in Solutions 3048
MISONO, A. The Oxygenation-deoxygenation of Cobalt(II) Complexes on Polymers.....3470
MISUMI, S. Preparation of a Dimeric Copper(II) Complex with Dithio α-Diketone 2403
MISUMI, S. The "Circular Dichroism-sensitive Band" in the Optical Absorption of the Lanthanide(III) Complexes with Some Optically Active Ligands.....3433
MISUMI, S. See YAMAMOTO, Y., 984.
MITA, K. Constitution of Mucilage from *Ulva Conglobata*. I 3496
MITOTE, T. See TODA, F., 1777.
MITSUDO, T. See TAKEGAMI, Y., 202. 206. 1992.
MITSUI, S. See SOHMA, A., 1451.
MITSUI, S. See SUGI, Y., 2984.
MITSUISHI, M. On the Ionic Association of Alizarine Saphirol SE in Waterdioxane Mixtures.....2384
MITSUYA, N. See MIZUIKE, A., 253.
MIURA, M. Nature of Acid Sites on the Surface of Silica-alumina. I.....1476
MIURA, M. See HASEGAWA, A., 846.
MIURA, M. See KUBOTA, Y., 853. 2763.
MIURA, M. See WADA, G., 2498.
MIURA, M., See YAMADA, Y., 1836.
MIURA, T. See HAGIWARA, M., 3380.
MIURA, Y. Synthesis of a Fragment (Pentapeptide) of *E. Coli* Acyl Carrier Protein Apoprotein....3592
MIWA, T. See SAKAN, T., 2952.
MIYACHI, I. See NAKAHARA, A., 573.
MIYAGAWA, T. See OGURA, H., 1763.
MIYAGI, H. See FURUYA, Y., 2348.
MIYAMOTO, K. See KODAMA, M., 163. 833. 835. 1596.
MIYANO, S. Deoxygenation of Styrene Oxide by Zinc Metal and Lewis Acid..... 746
MIYAZAKI, K. Thermal Decomposition of 1,1-Disubstituted-3-aryl-3-(aryloxythiocarbonyl)-2-thioureas 1697
MIYAZAKI, K. The Effect of Impurities on the Whiteness of Lanthanum Oxide 2046
MIYAZAKI, S. See FURUYA, Y., 1769.
MIYAZAKI, S. See SUHARA, Y., 3022.
MIYAZAKI, T. Some Remarks on the Fragmentation of Excited Ions in the Radiolysis of Hydrocarbons 362
MIYAZAKI, T. Fragmentation of the Excited Isobutane Ion Produced by Charge Transfer from the Nitrogen Molecule Ion 894
MIYAZAKI, T. Effect of Phase on the Trapped Radical in the Radiolysis of Solid Isobutane as Studied by ESR Spectroscopy.....2086
MIYAZAKI, T. Hybridization of Carbon and Equilibrium Distance.....2767
MIYAZAKI, T. See WAKAYAMA, T., 266. 1164.
MIYAZAWA, T. Rotational Isomers in Two Crystalline Phases of *N*-Methylchloroacetamide 3021
MIYAZAWA, T. See KITAGAWA, T., 3437.
MIYAZAWA, T. See MASUDA, Y., 570
MIYAZAWA, T. See MATSUURA, H., 372.
MIYAZAWA, Y. See KOTERA, A., 3093.
MIYOSHI, M. Studies on Polymorphism of Glutathione 1749
MIYOSHI, M. See SAKAKIBARA, S., 809.
MIZOROKI, T. See NAKAYAMA, M., 1124.
MIZUIKE, A. Electrolytic Separation with Glassy-Carbon Electodes Prior to Emission Spectrography: Determination of Traces of Silver in High-Purity Zinc 253
MIZUKAMI, F. See KAWAI K., 2396.
MIZUMURA, M. See SŌFUKU, S., 278.
MIZUNO, H. The Crystal and Molecular Structure of the Sodium Salt of Xanthine.....3099
MIZUNO, M. See TANAKA, J., 1841.
MIZUTA, T. See SAMEJIMA, H., 2722.
MIZUTANI, Y. Studies of Ion Exchange Membranes. XXX 2459
MIZUTANI, Y. Reaction of Modified Polypropylene Fiber Containing the Glycidyl Group with Several Amines and Ammonia 3324
MIZUTANI, Y. See SATA, T., 279.
MIZUTANI, Y. See YAMANE, R., 2741.
MOMOSE, Y. See TAMAI, Y., 1219.
MORI, M. See KOBAYASHI, H., 709.

MORI, M. See YAMAMOTO, Y., 984.
MORI, N. Intramolecular Hydrogen Bonds. XIII. 482
XIV 488
MORI, T. See NOZAKI, H., 1163.
MORI, W. See HARA, K., 576.
MORI, Y. Organic Syntheses by Means of Metal Complexes. III 777
MORI, Y. See SHIZUKA, H., 1831.
MORI, Y. See TSUJI, J., 527.
MORIKAWA, K. See MASAI, M., 464.
MORIMOTO, T. Heat of Immersion of Titanium Dioxide in Water. I 943
MORIMOTO, T. The Heat of Immersion of Ferric Oxide in Water.....1490
MORIMOTO, T. See OMORI, T., 2198.
MORIMOTO, Y. See YONEDA, H., 1160.
MORIMURA, S. See MURAYAMA, K., 1640.
MORINAGA, K. Ignition Delay Time Studies of Hydrogen and Oxygen Reactions through Silent Electric Discharge 2106
MORINO, Y. See FUKUYAMA, T., 379.
MORINO, Y. See NAKAGAWA, T., 2212.
MORINO, Y. See TANIMOTO, M., 2519.
MORISHIMA, I. See YONEZAWA, T., 1248.
MORITA, K. New Addition Reactions of Acrylic Compounds with Fumaric Acid Esters Catalyzed by Tervalent Phosphorus Compounds.....2732
MORITA, M. Studies of the Transient Intermediates of a Thiopyronine Aqueous Solution under Flash Excitation..... 25
MORITA, S. See KAGIYA, T., 2578. 2583.
MORITA, T. See SHIZUKA, H., 1831.
MOROFUSHI, T. See KAINOSHO, M., 845.
MOTOI, M. See NOJIRI, T., 3359.
MOTOKI, S. Studies of Acetothiolacetate 1322
MOTOMIZU, S. Studies of the Interaction between the Hexyl Anion and Alkali Metal Ions.....1006
MOTOMIZU, S. The Separation Factor for Alkali Metals in Solvent Extraction with Hexyl 2074
MOTOYAMA, I. See KONO, H., 3267. 3270. 3273.
MOTOYAMA, I. See SATO, M., 1976.
MOTOYAMA, I. See SHIGA, M., 798.
MUIRCHEARTAIGH, S. O. See AKAGANE, K., 3204.
MUKAI, K. Anomalous Magnetic Properties of Stable Crystalline Phenoxyl Radicals 40
MUKAI, K. See ISHIZU, K., 2808.
MUKAI, K. See KOSAKI, A., 1525.
MUKAI, T. Photoreaction of 3,4-Diphenyl-1,2,5-oxadiazole 581
MUKAIBO, T. See TSUJI, T., 2193.
MULTANI, R. K. See ANAND, S. K., 554.
MULTANI, R. K. See ANAND, S. P., 3459.
MURAHASHI, S. See INAKI, Y., 2605.
MURAHASHI, S. See OHBAYASHI, G., 2729.
MURAHASHI, S. See WAKATSUKI, Y., 273.
MURAKAMI, K. See KURIMURA, Y., 2715.
MURAKAMI, S. See MURAKAMI, T., 35.
MURAKAMI, T. Heat of Mixing for Binary Mixtures: Pyridine Derivatives + Benzene, and + Cyclohexane Systems 35
MURAKAMI, Y. Reaction of 6-Methylpicolinic Acid *N*-Oxide with Acetic Anhydride.....3350
MURAKAMI, Y. Solvolysis of Organic Phosphates. II 3478
MURAKAMI, Y. See HAYAKAWA, T., 479.
MURAKAMI, Y. See NAKAHARA, A., 3350.
MURAMATSU, H. The Addition Reactions of Fluoroalkyl Ethyl Ethers to Perfluoropropene.....1155
MURAMATSU, H. See UEDA, T., 1684.
MURAMATSU, I. See ARAI, I., 2739.
MURAMATSU, M. See TAJIMA, K., 2471.
MURAMATSU, N. See MINATO, H., 1146.
MURAOKA, Y. See MIURA, M., 1476.
MURASATO, S. See TORII, Y., 2264.
MURASE, I. See KANATOMI, H., 1329.
MURASHIMA, H. See HOTTA, H., 2413.
MURATA, H. See MIDO, Y., 3372.
MURATA, N. See TAMURA, H., 3041. 3044.
MURAYAMA, K. Studies on Stable Free Radicals. II 1640
III.....1942
IV 2307
MURAYAMA, T. See ŌKI, M., 1986.
MURAYAMA, W. The Crystal Structure of 5,5-Dimethyl-2-oxo-2-hydroxy-1,3,2-dioxaphosphorinane Monohydrate 1819
MUROI, M. A Partial Asymmetric Synthesis *via* a Cyclic Oxyphosphorane 2948
MUROI, T. See TAKESHITA, H., 2068.
MUROYA, M. The Effect of Deuterium Exchange of Silica Gel on Dielectric Relaxation.....2724
MUROYA, M. See KONDO, S., 1165.
MUTO, F. See IIJIMA, K., 1509.
MUTO, F. See OONISHI, I., 2791.
MUTO, M. See BABA, T., 2697.
MUTO, Y. Magnetic Moments and d–d Bands of Copper(II) Halide Complexes with Substituted Pyridine *N*-Oxides and Some Related Ligands 417
MUTO, Y. See KATO, M., 2555. 3039.
NABAR, D. P. Reactions of Organometallic Compounds with Conjugated Enol Ethers: Synthesis of β-Arylactylates, Diarylmethylmalonates and Analogous Compounds 2991
NAEMURA, K., See NAKAZAKI, M., 3366.
NAGAI, T. The Solvent Effects in the Acylation of Alcohol. The Effects of Liquid Sulfur Dioxide on the Dissociation of Hydrogen-bonded Alcohol 1705
NAGAI, T. See YAMASHITA, T., 1145.
NAGAI, Y. See NAKAJIMA, T., 2706.
NAGAKURA, S. See AZUMI, T., 685. 2203.
NAGAKURA, S. See ITO, T., 702.
NAGAKURA, S. See SAKATA, T., 1497.
NAGAO, M. See MORIMOTO, T., 943. 1490.
NAGAO, M. See OMORI, T., 2198.
NAGASE, K. See TANAKA, N., 2854.
NAGASE, S. Fluorination of Inorganic Sulfur Compounds 2062
NAGASHIMA, K. See SAKURAI, K., 2725.
NAGATA, C. See FUJITA, H., 1467.
NAGATA, C. See IMAMURA, A., 3118.
NAGATA, K. See YUKI, H., 3546.
NAKABAYASHI, N. See IWAKURA, Y., 741.
NAKAGAWA, T. Anharmonic Potential Constants and Vibrational and Rotational Parameters for Hydrogen Cyanide.....2212
NAKAGAWA, Y. See OKAWA, K., 2720.
NAKAHARA, A. The Stability of Fused Rings in Metal Chelates. V..... 573

NAKAHARA, A. Energy Transfer between Benzene and Toluene in the Singlet States at 90°K....3073
NAKAHARA, A. See HAMADA, K., 1297.
NAKAHARA, A. See IIJIMA, K., 1509.
NAKAHARA, A. See NAKAO, Y., 452.
NAKAHARA, A. See NAKAO, Y., 3484.
NAKAI, M. The Mechanism of the Base-Promoted Rearrangement of *N,N*-Dichlorocyclohexylamine to 2-Aminocyclohexanone and the Deaminative Diazotization of 2-Aminocyclohexanone.....2917
NAKAI, T. Syntheses and Reactions of Functional Polymers. XL. 508
NAKAI, T. Studies of the Estimation of the Interfacial Energy of Embryo in Solid-Liquid Systems 2143
NAKAJIMA, A. Quenching of Rubicene Fluorescence by Amines 3030
NAKAJIMA, A. On the Emission of Excited Complexes Formed between Condensed Aromatic Hydrocarbons and Aliphatic Amines 3409
NAKAJIMA, R. See NAKATSUJI, S., 3598.
NAKAJIMA, T. *N*-Alkylation of Metanilic Acid....2706
NAKAJIMA, Y. ESR Studies of Carboxylic Acid- and Ester-Radical Anions Produced by γ-Irradiation at 77°K 2132
NAKAMARU, K. Reactive States of Acridine in Alcohols and the pK Value of T(n-π^*) State as judged from the pH Dependence of the Photoreduction Quantum Yield 255
NAKAMIZO, N. Catalysis in Peptide Synthesis with Active Esters. I 1071
II.....1078
NAKAMURA, A. See KAINOSHO, M., 845. 1713.
NAKAMURA, D. See ONDA, S., 1771. 2740.
NAKAMURA, N. See CHIHARA, H., 3034.
NAKAMURA, Y. Electrodeposition of Water-soluble Resin by a Constant Voltage or by Pulses 1534
NAKANISHI, T. The Fries Rearrangement of 2-Ethyl-5-acetyloxybenzofuran 3600
NAKANO, E. The Crystal Structures of Pentaglycerol and Neopentylglycol 3367
NAKANO, M. See YAMAGUCHI, G., 2801.
NAKAO, K. See KAGIYA, T., 1094.
NAKAO, Y. The Stability of Fused Rings in Metal Chelates. IV 452
NAKAO, Y. Reactions of Metal Chelates. IV....3484
NAKAO, Y. See HAMADA, K., 1297.
NAKATA, H. Mass Spectrometry of Tautomeric Compounds. I.....1678
NAKATANI, M. See TAKAHASHI, Y., 274.
NAKATSUJI, H. See YONEZAWA, T., 2437.
NAKATSUJI, S. On the Stability of Silver(I) Complexes with an Imidazole and Its Derivatives 3598
NAKAYAMA, M. Synthesis of Carboxylic Acid from Aryl Halide and Carbon Monoxide Catalyzed by Nickel Carbonyl 1124
NAKAYAMA, M. See FUKUI, K., 199. 233. 1408. 1649. 1693. 1971. 2327. 2395.
NAKAZAKI, M. The Total Synthesis of (−)-Artemisin 3366
NAKAZAWA M. See KOBAYASHI, H., 2735.
NAMBA, S. See TAKI, K., 823. 2377.
NANJO, M. Spectrophotometric Studies of Ethyl Xanthate Complexes in Aqueous Solutions.... 968
NANJO, M. Acid Decomposition of Metal Xanthate Complexes and Their Stability Constants..... 972
NAONO, H. See MORIMOTO, T., 1490
NARITA, K. See KAGIYA, T., 1688. 2912.
NARITA, K. See KAGIYA, T., 3211.
NATH, P. See BANERJI, K. K., 2038.
NAYA, Y. Natural Occurrence of α-Cadinene....1468
NAYA, Y. Natural Occurrence of Humuladienone, Humulenone-II, ane α-Corocalene; New Constituents of Hop Oil.....2088
NAYA, T. Natural Occurrence of Humulol and Tricyclohumuladiol 2405
NEGITA, H. The Bond Character of the Sn–Cl Bonds in the Hydrates of Tin(IV) Chloride.....2509
NEGITA, H. See ICHIBA, S., 1486.
NEMOTO, M. Determination of the S*–T Transition Probabilities of Some Xanthene and Thiazine Dyes on the Basis of the T-Enery Transfer. I....1223
II 2464
NIHEI, Y. See SUZUKI, M., 323.
NIIZUMA, S. See NAKAMARU, K., 255.
NIKI, E. The Cooxidation of Hydrocarbons in the Liquid Phase. V..... 512
VI.....2312
NIKI, E. Solvent Effects in the Oxidations of Hydrocarbons. I 3220
II 3224
NIKI, E. Effects of Temperature and of Mixing on Dielectric Constants of Several Orgnic Solvents 3578
NINOMIYA, T. See IZUMI, Y., 241.
NISHI, N. See MATSUBAYASHI, G., 2369.
NISHIDA, Y. See MISUMI, S., 3433.
NISHIDO, T. The Cation-exchange Separation of Copper and Iron in Ammonical Pyrophosphate Media 3017
NISHIGUCHI, H. See FUJITO, T., 3334.
NISHIGUCHI, H. See ISHIZU, K., 2808.
NISHIKAI, A. See ZEN, S., 1761.
NISHIKAWA, H. See HOSAKA, K., 277.
NISHIKAWA, H. See WATANABE, K., 1150.
NISHIKAWA, M. Effect of Additives in the Radiolysis of Gaseous Ammonia at High Densities 116
NISHIKAWA, M. The Yeild of Hydrogen Atoms in the Vapor Phase Radiolysis of Ammonia 1783
NISHIMURA, K. See USAMI, S., 2961. 2966.
NISHIMURA, S. Hydrogenation and Hydrogenolysis. XI..... 499
NISHIMURA, S. Selective Homogeneous Hydrogenation of 3-Oxo-1,4-diene Steroids with a Ruthenium Complex as Catalyst 852
NISHIMURA, S. See TSUBOI, M., 102.
NISHIMURA, Y. See KAWAMOTO, K., 1105.
NISHIMURA, Y. See UMEZAWA, S., 537.
NISHIWAKI, T. Studies on Heterocyclic Chemistry. IV.....3024
NISHIYAMA, Y. Effects of Metallic Surfaces on the Thermal Decomposition of Ethane.....2494
NITTA, I. See KURAHASHI, M., 2174.
NITTA, I. See OKAMOTO, K., 1464.
NITTA, T. See OKAMOTO, Y., 543.
NIWA, J. Proton NMR Studies of Substituent Effects. The Hammett-type Relationship in *meta*- and *para*-Substituted Formanilides 1926
NIWA, K. See KODAMA, H., 681.
NIWA, K. See MAEKAWA, T., 677. 2102.

NOBUTOKI, K. Preparation of Star-Type Graft Copolymer through the Polymerization of Methyl Methacrylate with Use of the Potassium Complexes of Polystyrene having a Benzophenone Unit 1519
NODA, I. See YAMADA, Y., 1454.
NODA, I. See YONEZAWA, T., 650.
NODA, S. Transition Energy Diagram for Solvated Electrons and Its Application to the Interpretation of Their Absorption Spectra 16
NODA, T. Effect of Coexisting Minerals on Graphitization of Carbon under Pressure. III.....1738
NODA, T. See KODAMA, M., 2699.
NODA, Y. Synthesis and Spectrophotometric Observations of Ethyl *p*-(Acetylsalicylamino)-benzoate 2044
NOGATA, Y. See ITO, H., 2453.
NOGI, T. See YASUHARA, Y., 2070.
NOGUCHI, J. See OHNISHI, A., 1113.
NOGUCHI, M. Separation Factors of Adjacent Rare Earths between the Aqueous and Resin Phases in the Presence of EDTA.....2286
NOHARA, N., See SUZUKI, K., 1609.
NOJIMA, M. Spiro Compound Formation. III.....1351
NOJIRI, T. Effects of Metal Chlorides on the Reaction of Acetylacetone with *n*-Butyryl Chloride 3359
NOMURA, R. See OAE, S., 2903.
NOMURA, T. Volumetric Determination of the Iodide Ion with Mercury(II) Ethylenediaminetetraacetate Using Mercury(II)-Methylthymolblue as an Indicator..... 952
NOMURA, T. The Crystal Structure of $(-)_D$-Tris(trimethylenediamine)cobalt(III) Bromide Monohydrate 1016
NONAGASE, N. See NAKAO, Y., 452.
NOZAKI, H. [7](2,6)Pyridinophane and [7](2,6)-Pyrylophanium Perchlorate 1163
NOZAKI, H. See IIDA, T., 243. 929. 2820.
NOZAKI, H. See NAKAMURA, Y., 1534.
NOZAKI, H. See OKADA, T., 2981.
NOZAKI, T. A Systematic Cation Exchange Separation with Oxalate 245
NOZAKURA, S. See INAKI, Y., 2605.
NOZAKURA, S. See OHBAYASHI, G., 2729.
NOZAKURA, S. See WAKATSUKI, Y., 273.
NOZAWA, Y. ESR Spectra of System of the Transition Metal Compound and Trialkyl Aluminum. II. 2431
NOZOE, T. Reactions of Alkyltropylium Ions with a Base 3277
NOZOE, T. See TODA, T., 2028.
NUMAZAWA, R. See ENDO, T., 1101.
OAE, K. See TSUJIHARA, K., 2631.
OAE, S. The Alkaline Hydrolysis of Halophenols 177
OAE, S. The α Effect. Aminolysis on Saturated Carbon Atom 1110
OAE, S. The Alkaline Ethanolyses of Chlorophenyldiphenylsulfonium Halides, Chlorophenyl Phenylsulfones and Chloronitrobenzene in Aqueous Ethanol.....1622
OAE, S. The Basicities of Substituted Diphenyl Sulfoxides 1964
OAE, S. Alkaline Hydrolysis of Aryl Benzenethiolsulfinates 2899
OAE, S. Alkaline Hydrolysis of Aryl Benzenethiolsulfonates 2903
OAE, S. Alkaline Decomposition of Triarylsulfonium Halides with Various Bases 3528
OAE, S. See KHIM, Y. H., 1968.
OAE, S. See KIKUKAWA, K., 831.
OAE, S. See KUNIEDA, N., 1090. 1324.
OAE, S. See MINAMIDA, I., 3609.
OAE, S. See NAKAI, M., 2917.
OAE, S. See TAGAKI, W., 2894.
OAE, S. See TOSHIYASU, Y., 1878.
OAE, S. See TSUJIHARA, K., 2631.
OBARA, H. The Photo-Fries Rearrangement of Hydroxyphenyl Cinnamates 560
OBARA, H. A Synthesis of 2-(2′-Hydroxyethyl)-cyclopentanone by the Barton Reaction 2705
OBARA, H. The Intramolecular Hemiacetal Structure of Benzoyl(2-hydroxybenzoyl)-carbinol and Its Monobenzoate 3345
OBATA, K. See KAGIYA, T., 3519.
OCHI, H. See SATO, K., 1747.
ODA, M. The Synthesis and Physical Properties of 1,6-Dimethyl-8,8-dicyanoheptafulvene.....2386
OGATA, T. Microwave Spectrum of Cyclohexene..1263
OGATA, T. See KUMAMOTO, K., 3245.
OGATA, T. See TSUCHIYA, M., 1756.
OGATA, Y. Photochemical Ethoxycarbonylmethylation of Benzene with Ethyl Haloacetates.... 794
OGATA, Y. Spectrophotometric Determination of L-Ascorbic Acid 2282
OGATA, Y. See SAKANISHI, K., 2502.
OGAWA, K. Electroless Nickel Plating from Acid-acetate Baths Containing Hypophosphite as a Reducing Agent 1135
OGAWA, K. The Cerimetric Determination of Hypophosphite after Oxidation with Iron(III).....1449
OGI, Y. See KOBAYASHI, M., 2737.
OGINO, H. The Kinetics of Substitution Reactions Involving Metal Complexes. XIII 1578
OGINO, K. Association Involving Optically Active Ions. II..... 447
OGURA, H. Radiolysis of Methanol Containing Cyanogen Iodide.....1763
OGURA, K. See MATSUURA, T., 2970.
OGURA, T. The Etherification Reactions of Allyl Alcohol Catalyzed by the Copper(I) Chloride Complex 643
OGURA, T. See TEZUKA, Y., 443.
OHASHI, M. See SATO, K., 2319.
OHASHI, S. See KAMO, M., 3616.
OHBAYASHI, G. A Convenient Method for the Preparation of Poly(Vinyl Alcohol) from Poly(*t*-Butyl Vinyl Ether) 2729
OHBAYASHI, H. See MIYAZAKI, T., 2767.
OHGO, Y. Asymmetric Reactions. II 728
III.....2957
OHIGASHI, N. Paramagnetic Susceptibilities of Some DPPH Derivatives 1212
OHKI, K. See TOKIWA, F., 575. 1216.
OHKUBO, K. A Kinetic Study on the Homogeneous Liquid-phase Oxidation of Cumene in the Presence of Triphenylsulfonium Chloride 1800
OHKUBO, K. A Study of the Low-temperature Oxidation of Cumene in the Presence of Triphenylsulfonium Chloride. Propagation and Termination Steps.....2220

OHKUBO, K. See FUKUI, K., 312.
OHMASA, M. Mechanochemical Spin Generation in a Solid Charge Transfer Complex.....2402
OHNISHI, A. Spectrophotometric Studies of the Copolymer of L-Tryptophan-L-Glutamic Acid in an Aqueous Solution 1113
OHNISHI, T. See SAKAKIBARA, S., 809.
OHNISHI, Y. See OHNO, A., 3556.
OHNO, A. Electronic Spectra of *O*-Alkyl Thiobenzoates and Their Derivatives 3556
OHNO, K. See KAJIWARA, T., 2734.
OHNO, M. See MUROI, M., 2948.
OHNO, M. See SASAKI, T., 3582.
OHNO, T. Energy Transfer from the Triplet Excited States of Aromatic Molecules to Chromium(III) Complexes. 3385
OHSUKA, A. See KUSUMOTO, S., 812.
OHTA, H. Organische Metallkomplexe. VII 3019
OHTA, M. See CHIGIRA, Y., 224. 228.
OHTA, M. See CHINONE, A., 2310.
OHTA, M. See SATO, S., 2054.
OHTA, M. See SHIN, C., 191.
OHTA, N. See NIKI, E., 512. 2312. 3220. 3224.
OHTA, N. See NIKI, E., 3578.
OHTAKI, H. Ionic Equilibria in Mixed Solvents. IV 1573
OHYA, T. See TACHIBANA, T., 2180.
OINE, T. See MUKAI, T., 581.
ŌISHI, Y. See NAKANISHI, T., 3600.
OIWA, M. See MATSUMOTO, A., 1959.
OIWA, M. See URAGAMI, T., 2426.
OJIMA, I. Reactions of Diarylphosphines, Their Oxides and Sulfides with Isothiocyanates and Thiocyanic Acid.....2975
OKA, I. See ŌKI, M., 1986. 2944.
OKA, T. A New Approach to the Study of the Reactions of Nitrogen Atoms with Hydrocarbons 582
OKA, T. The Radiolysis of Liquid Nitrogen Containing Hydrocarbons. I 3083
OKA, Y. The Yields of Photonuclear Reactions in Titanium and Vanadium with Bremsstrahlung up to 60 MeV 387
OKA, Y. The Yield of Photonuclear Reactions Leading to the Production of Beryllium-7 with Bremsstrahlung up to 60 MeV 981
OKBAYASHI, H. See SAKAI, R., 3028.
OKABE, T. See UMEGAKI, T., 1304. 1555. 2364.
OKADA, I. The Formation of 1,4-Disubstituted Piperazines from 1-Substituted Aziridines..... 547
OKADA, T. Photolysis of Aromatic Oxime Benzoates 2981
OKAI, H. Resolution of Amino Acids. IX 3550
OKAJIMA, T. See TAKEGAMI, Y., 1992.
OKAMOTO, G. See FURUICHI, R., 2475.
OKAMOTO, J. Moderator Effects on the Reactions of ^{80}Br Activated by the Isomeric Transition with Gaseous Methyl Bromide 1504
OKAMOTO, K. Acidic Cleavate of Anispinacolone. Formation of a Substituted Benzofuran *via* an Acylcarbonium Ion Intermediate.....1464
OKAMOTO, K. One-Electron Reduction of Carbonium Ions. II.....3249
OKAMOTO, K. Kinetic Studies of Solvolysis. XVI..3288
OKAMOTO, K. Phenolytic Rearrangement and Isomerization of *cis*- and *trans*-4-*t*-Butylcyclohexyl *p*-Toluenesulfonate in a Phenol-Benzene Solvent 3298
OKAMOTO, K. See SANO, T., 2505.
OKAMOTO, Y. Preparation of 2-Alkenonitrile by Means of the Pyrolysis of Diethyl 1-Cyanoalkyl Phosphate..... 543
OKAMOTO, Y. Reaction of *trans*-Stilbene with *n*-Butyllithium in Tetrahydrofuran..... 760
OKAMOTO, Y. See YUKI, H., 1644. 1754.
OKAMURA, S. See TSUJI, K., 2827.
OKAWA, H. Macro Chelate Rings. I 1934
OKAWA, H. See INAZU, T., 2291.
OKAWA, K. Studies on Hydroxy Amino Acids. II 2720
OKAWA, R. See AOYAGI, H., 782.
OKAWARA, M. See ENDO, T., 1101.
OKAWARA, M. See NAKAI, T., 508.
OKAWARA, R. See SHINDO, M., 265.
OKAZAKI, C. See SATO, H., 1439.
OKAZAKI, R. Oxidation Reactions of 2,4,6-Tri-*t*-butylaniline 3559
OKAZAKI, R. Preparation of Sterically Hindered Nitrosobenzenes 3611
OKAZAKI, T. See KUSUMOTO, S., 812.
OKAZAKI, T. See TAKEGAMI, Y., 1060.
OKI, F. See NAKAMURA, Y., 1534.
ŌKI, H. See HAGIWARA, Z., 3177. 3454.
ŌKI, M. Intramolecular Interaction between the Hydroxyl Group and the Cyclopropane Ring 1986
ŌKI, M. Conformation and S=O Stretching Absorptions of Simple Sulfoxides 2944
ŌKUBO, K. See KOTAKE, H., 1367.
ŌKUBO, M. The Reactions of Aroyl Peroxides with Grignard Reagents. I.....1162
OKUDA, H. See HATADA, K., 1781.
OKUDA, T. See HAYASHI, S., 3026.
OKUDA, T. See NEGITA, H., 2509.
OKUMIYA, M. See YAMAGUCHI, G., 2247.
OKUMOTO, T. See TSUGE, S., 2870.
OKUMURA, K. See MIYOSHI, M., 1749.
OKUMURA, K. See SAKAKIBARA, S., 809.
OKUNO, H. See MIKI, E., 3007. 3050.
OKUYAMA, T. The Structure-Stability Relationship of the Metal Ion Complexes of Unsaturated Compounds. V.....3106
OMORI, A. The Reaction of Carbon Suboxide with Alicyclic Diketones and with Phenols. Formation and Structure of Pyrone Derivatives.....3233
OMORI, K. See UMEGAKI, T., 1304.
OMORI, T. Heat of Immersion of Titanium Dioxide in Water. II. 2198
OMORI, T. See MORIMOTO, T., 943.
OMORI, T. See SHIOKAWA, T., 436. 696.
OMOTE, Y. Synthesis of Pipataline 569
OMOTE, Y. Synthesis and Melanogenesis of the DOPA Dimer 1752
OMOTE, Y. Luminol Amidine 2090
OMOTE, Y. The Chemiluminescence of Indole Accompanying Oxidation by Perbenzoic Acid....3014
OMOTE, Y. Synthesis of 5-Chloro-6-Methoxy-*N*-Methylisatin 3016

ONDA, S. Nuclear Quadrupole Resonance of Nitrogen-14 in Some Aliphatic Nitriles 1771
ONDA, S. Nuclear Quadrupole Resonance of Nitrogen-14 in Tetracyanoethylene and 7,7′,8,8′-Tetracyanoquinodimethane.....2740
ONISHI, T. On the Presence of Tetrafluoroborate Ions in Natural Waters..... 127
ONISHI, T. See FUKUDA, K., 1192.
ONISHI, T. See UENO, A., 3040.
ONO, H. See MINESHITA, T., 594.
ONO, K. See AOKI, T., 545.
ONO, K. See MARUYAMA, K., 3357.
ONO, S. See MINESHITA, T., 594.
ONO, S. See SUZUKI, K., 2773.
ONO, S. See WATANABE, T., 583.
ONO, S. See YAMAGUCHI, G., 2247.
ONODERA, J. See OBARA, H., 3345.
ONOUE, Y. See YAMANE, R., 2741.
OONISHI, I. The Molecular and Crystal Structure of *trans*-Dinitrotetramminecobalt(III) Nitrate Monohydrate 2791
OONISHI, I. See IIJIMA, K., 1509.
ŌSUGI, J. See MARUYAMA, K., 3357.
ŌSUGI, J. See ŌKUBO, M., 1162.
ŌTANI, S. Characteristic Chemical Constitution of Pitch Materials Suitable for the MP Carbon Fiber 1417
OTOUMA, H. The Acidic Nature of Synthetic Zeolites:Acid Strength and Its Correlation with the Catalytic Activity 2449
OTSU, T. The Polymerizations and Copolymerizations of α-Methoxyacrylonitrile and Methyl α-Methoxyacrylate 3207
OTSU, T. See AOKI, S., 2574.
OTSU, T. See YAMAMOTO, T. 1364.
OTSUJI, Y. Reaction of Methylsulfinyl Carbanion with Substituted Phthalic Esters..... 732
OUCHI, A. Syntheses and Properties of Some Metal Bromo-Dithiolium Complexes 2259
OUCHI, A. See EGUCHI, H., 3585.
OUCHI, A. See FURUHASHI, A., 260.
OUCHI, A. See TAKAHASHI, Y., 274.
OYOBE, T. See SASAKI, T., 3582.
OYOSHI, A. See SHINOMIYA, C., 1437. 2040. 2356.
OZAKI, A. See TSUCHIYA, S., 344.
OZAKI, K. The Intensities of the n-π^* Absorption Bands of Several Aliphatic Carbonyl Compounds 3076
OZAWA, Y. See KATAYAMA, M., 2410.
OZEKI, K. The Low Temperature n-π^* Absorption Spectra of the Cyclohexane-1,4-dione Crystal..3390
PAN, T. P. See SUGA, K., 3606.
PATEL, S. R. See THAKKAR, R. K., 3198.
PRAKASH, C. Effect of Some Cationic Detergents on Macromolecularly Stabilised Emulsions with Special Reference to Sodium Alginate and Gum Arabic as Emulsifiers 1787
PRAKASH, S. Effect of Ultrasonic Waves on Eriochrome Black T..... 289
RAMAMOORTHY, S. Stability Constants of Some Uranyl Complexes. II. 411
RYU, S. See TODA, T., 2028.
SADAMOTO, K. See YUKI, H., 1754.
SAEGUSA, T. Interaction between Aldehyde and Tris(trimethylsiloxy)aluminum 248
SAEGUSA, T. Synthetic Reactions by Complex Catalysts. XIII 2610
XIV 3310
SAEGUSA, T. Reaction of Ethyl Diazoacetate with Cupric Chloride 3535
SAI, M. See YOKOI, H., 2232.
SAISHŌ, H. See YASUHARA, Y., 2070.
SAITO, H. See KAMIYA, K., 1425.
SAITO, H. See NODA, T., 1738.
SAITO, I. See MATSUURA, T., 2973.
SAITO, K. Kinetics of Isotopic Exchange between Acetylacetone-^{14}C and Bisacetylacetonatopalladium(II) in Organic Solvents 3462
SAITO, K. See ITO, H., 1286. 2863.
SAITO, K. See SASAKI, Y., 146.
SAITO, K. See YANO, S., 3184.
SAITO, N. New Empirical Formulae for the Mass Effect in the Coutercurrent Electromigration of Molten Metal Halides 2409
SAITO, N. See SHIMANOUCHI, H., 1239.
SAITO, S. The Microwave Spectrum, Structure, and Dipole Moment of Ethylene Episulfoxide..... 663
SAITO, S. Detection of Sulfur Monoxide in the Pyrolysis of Ethylene Episulfoxide by Microwave Spectroscopy 667
SAITO, S. See UCHIDA, A., 2989.
SAITO, T. The Mechanism of the Scintillation from a Benzene Solution of *p*-Terphenyl 2228
SAITO, T. See KOTAKE, H., 1367.
SAITO, Y. See NOMURA, T., 1016.
SAITO, Y. See UNO, T., 619. 897. 1539.
SAITŌ, S. See OKAMOTO, K., 3288. 3298.
SAITOU, E. See TABEI, K., 1440. 2693.
SAKABE, T. See INOUYE, K., 308.
SAKAGUCHI, K. See ŌKI, M., 2944.
SAKAI, K., See KUNIEDA, N., 1090.
SAKAI, K., See OAE, S., 1964.
SAKAI, N. See SHIROTANI, I., 2087.
SAKAI, R. The Structure of Copolymers of L-Proline with γ-Benzyl L-glutamate in Organic Solvents 1332
SAKAI, R. The Structure of Copolymers of L-Proline with L-Glutamic Acid in Aqueous Solutions....1337
SAKAI, R. The NMR Study of Poly-L-Prolines I and II 3028
SAKAI, T. The Spectrophotometric Determination of Zirconium(IV) with Bromopyrogallol Red....2272
SAKAI, T. The Spectrophotometric Determination of Thorium(IV) with 4-(2-Thiazolylazo)-resorcinol 2718
SAKAI, T. Farnesenes Isolated from the Volatile Oil of *Perilla frutscens f. viridis* Makino 3615
SAKAI, T. See TONOSAKI, K., 456.
SAKAIRI, M. See SEKINE, T., 2712.
SAKAKIBARA, S. *t*-Amyloxycarbonyl as a New Protecting Group in Peptide Synthesis. V 809
SAKAKIBARA, S. Synthesis and Use of N^{im}-Tosyl-L-histidine 1466
SAKAKIBARA, S. See KOBAYASHI, A., 3491.
SAKAKIBARA, Y. See KUNICHIKA, S., 1082.
SAKAN, T. Base-catalyzed Condensation of *o*-Nitroacetophenone. IV 2952
SAKANISHI, K. Catalytic Vapor-Phase Ammoxidation of Substituted Toluenes over Chromium Oxide 2502
SAKANO, M. See MASUDA, I., 2296.

SAKANOUE, S. Electronic Spectra of Organic Charge Transfer Salt of 2-Dicyanomethylene-1,1,3,3-tetracyanopropane 2407
SAKANOUE, S. The Crystal Structure of an Organic Charge Transfer Salt $[2(C_9H_8N)^+ \cdot (C_{10}N_6)^{2-}]$ 2408
SAKATA, T. Spectroscopic Behavior of Würster's Blue Perchlorate and *N*-Ethylphenazyl Crystals 1497
SAKIOKA, K. See FUJIWARA, S., 2120.
SAKIYAMA, A. See KODERA, K., 3124.
SAKOTA, N. See KOINE, N., 1583. 1779.
SAKUDA, Y. The Configuration of 6,8(9)-*p*-Menthadien-2,4-diols and *p*-Menthane-4-2,diols..... 475
SAKUDA, Y. The Oxidation of Limonene with Selenium Dioxide 3348
SAKUMOTO, A. Amination of Benzoic Acid in the γ-Radiolysis of Liquid Ammonia..... 755
SAKURABA, S. See MAKI, N., 579. 1908. 3159. 3166.
SAKURAI, A. The Cyclization of Benzoylacetonitrile and Ketones by Ammonium Acetate..... 220
SAKURAI, H. Reductive Dehalogenation of Halobenzenes with Hydrosilanes in the Presence of Free-Radical Initiators 1461
SAKURAI, H. The N→O Acetyl Migration of 5-Substituted-2-pyrrolidinemethanols.....3524
SAKURAI, H. See OKAMOTO, Y., 543.
SAKURAI, H. See SHIMA, K., 849.
SAKURAI, H. See TERAUCHI, K., 821. 2714.
SAKURAI, K. Chemical Studies of Minerals Containing Rarer Elements from the Far East. LXIII 2725
SAMEJIMA, H. Isomerization and Hydrogenation of Dimethyl Maleate and 1,5-Cyclooctadiene by Nickel Cyanide Complex 2722
SANO, I. See UZU, Y., 1807.
SANO, M. See SATO, Y., 548. 3051.
SANO, T. Photoconductive Properties of Organic Polyiodides 2505
SANTAPPA, M. See RAMAMOORTHY, S., 411.
SARKIS, G. Y. See JACKMAN, J. M., 1179.
SASADA, Y. See SHIMANOUCHI, H., 334. 1239.
SASADA, Y. See TANAKA, N., 1546.
SASAKI, C. See KODAMA, M., 163.
SASAKI, K. The Surface Rearrangement of Adsorbed Hydrogen on Platinum Electrodes.....1744
SASAKI, K. The Ultrasonic Study of Aqueous Solutions of Alkyl-Substituted Urea 2485
SASAKI, K. See ARAKAWA, K., 303. 2079.
SASAKI, T. Studies of Heteroaromaticity. XX.... 258
XXIII 826
XXIX 556
XXXI 3008
XXXII.....3335
SASAKI, T. Studies on Reactions of Isoprenoids. V 558
VI 3582
SASAKI, T. Synthesis of Vitamin B_{12} Model Compounds 1308
SASAKI, T. Synthesis of Adamantane Derivatives. III.....1617
SASAKI, T. A Revised Structure of Pyrolumisantonin 2736
SASAKI, T. See SEIMIYA, T., 2797.
SASAKI, T. See TAJIMA, K., 2471.
SASAKI, Y. Spectroscopic Studies of Polynuclear Complexes. I 146
SASAKI, Y. Preparation and Optical Resolution of μ-Amido-μ-superoxo and μ-Amido-μ-peroxo Tetrakis (α-di-imine) Dicobalt(III) Ions 2089
SASAKI, Y. The Crystal Structure of Diamminecadmium(II) Tetracyanoniccolate(II) Benzene Clathrate, $Cd(NH_3)_2Ni(CN)_4 \cdot 2C_6H_6$ 2412
SASENA, T. See KUMAR, K., 3141.
SASTRY, T. G. Effect of Cationic Detergents on the Lecithin Stabilized O/W Emulsion 291
SATA, T. Concentration Polarization Phenomena in Ion-exchange Membrane Electrodialysis. I 279
SATA, T. See YAMANE, R., 2741.
SATA, T. See YOSHIMURA, M., 3195.
SATAKE, I. The pNa Study of Sodium Alkyl Sulfates in Aqueous Solutions 319
SATAKE, I. See TAHARA, T., 1201.
SATO, H. A Band Model of the Charge-Transfer Complexes 1439
SATO, H. Spectroscopic Studies of the Structures of the Dimer of Diethylaluminum 2-Aminoethoxide $(AlEt_2OCH_2CH_2)_2$ and Related Compounds 1588
SATO, H. Spectroscopic Studies of the Mixture of Dialkylaluminum 2-Aminoethoxide $(AlR_2OCH_2 \cdot CH_2NR'_2)_2$ and Trialkylaluminum$(AlR''_3)_2$....2849
SATO, K. β-Diketon Involving Fluorine. V 1747
SATO, K. Reaction of Tetraethyl α-Phosphonodicarboxylates with Carbonyl Compounds..... 250
SATO, K. Coumarins. VI.....2319
VII 2600
SATO, K. Synthetic Studies of the Derivatives of Acetylene. I.....2589
SATO, K. Studies of the Direct Dissolution of Metal in a β-Diketone Reagent 2778
SATO, K. Effect of Particle Size on Infrared Spectra of Inorganic Powders.....3593
SATO, M. The Reaction of Haloferrocenes with Copper(I) Salts in Pyridine 1976
SATO, N. See FURUICHI, R., 2475.
SATO, N. See OKA, Y., 387.
SATO, N. See SUGINOME, H., 215.
SATO, S. The Reaction of *N*-Acylmethylisoquinolinium Betain with Heterocumulens 2054
SATO, S. See CHINONI, A., 2310.
SATO, S. See NAKAJIMA, Y., 2132.
SATO, S. See OKA, T., 582. 3083.
SATO, S. See SAITO, T., 2228.
SATO, S. See TSUNASHIMA, S., 329. 1531.
SATO, T. Photo-Aryl Coupling and Related Reactions II 766
III..... 773
SATO, T. Reactions of Cycloalkanone Oxime *p*-Toluenesulfonates 1955
SATO, T. Photolytic Formation of a Ferrocenyl: Radical from Iodoferrocene 2731
SATO, T. See MOTOKI, S., 1322.
SATO, T. See OHGO, Y., 728. 2957.
SATO, T. See TAKAHASHI, Y., 2707.
SATO, T. See YOSHIMURA, J., 2352.
SATO, Y. A Correlation between the Magnetic and Optical Properties of Some Cation Radical Salts 548

SATO, Y. Polarographic Behavior of Tris(2,2′-bipyridine)chromium(III) and Tris(ethylenediamine) chromium(III) in Acetonitrile Solutions 1021
SATO, Y. Magnetic and Optical Properties of Aromatic Hydrocarbon Cation Radical Salts.....3051
SATO, Y. See KASHIMA, C., 3596.
SATO, Y. See SUGIYAMA, N., 1153. 3005.
SATOH, S. See MAEDA, T., 2635.
SATOH, S. See TSUNASHIMA, S., 329. 1531.
SATOH, Y. Synthesis of 1-Oxygenated 5β-Cholestanes 1465
SATOH, Y. See ARAI, I., 2739.
SAWADA, S. Partial Asymmetric Synthesis in the Simmons-Smith Reaction. III 2669
SAXENA, L. K. See KUMAR, K., 3141.
SEIMIYA, T. The Adsorption of Cobaltous Ions on Glass Beads from Extremely Dilute Aqueous Solutions 2797
SEKI, S. See KOSAKI, A., 1525.
SEKI, S. See MATSUO, T., 1271.
SEKIGUCHI, S. A New Synthesis of Tris(triphenylsilyl)Vanadate 1453
SEKINE, T. Studies of Actinium(III) in Various Solutions. II..... 432
III.....2712
SEKIZAKI, M. The 1 : 1 Complexes of Pyridine-2-carboxamide with Bivalent Metals..... 399
SEKO, H. See MIYOSHI, M., 1749.
SENGUPTA, K. K. Kinetics and Mechanism of the Oxidation of Citric and Glyoxylic Acids by Cerium(IV) Ion 298
SENŌ, M. See ASAHARA T., 1316. 1996. 2337. 2416.
SERA, A. See SUGAHARA, Y., 2656.
SERA, A. See SUZUKI, H., 851.
SETO, S. See MIURA, Y., 3592.
SHARMA, M. M. See SUNDARAM, P. K., 3148.
SHIBATA, K. Effect of Potassium Promoter on Iron Oxide Catalysts for Dehydrogenation of Ethylbenzene to Styrene 871
SHIBATA, M. See HOSAKA, K., 277.
SHIBATA, M. See ICHIKAWA, H., 2873.
SHIBATA, M. See WATANABE, K., 1150.
SHIBUYA, I. A Method of Synthesizing Pyrimidine Derivatives 2382
SHIDA, S. See MIYAZAKI, T., 362.
SHIDA, S. See NAKAJIMA, Y., 2132.
SHIDA, S. See TANNO, K., 2128.
SHIDA, T. Spectroscopic Studies on Radicals Produced from Acridine and Acridan in γ-Irradiated Rigid Solutions at −196°C 1197
SHIDA, T. Optical and ESR Studies on Triphenylimidazolyl Radicals Produced by Photolysis and Radiolysis at Low Temperature 3044
SHIGA, M. Nitroalkenylferrocene. II 798
SHIGA, M. See KONO, H., 3267. 3270. 3273.
SHIGEMATSU, T. The Synergistic Effect in Solvent Extraction. The Effect of Carboxylic Acid on the Solvent Extraction of Europium(III) with Benzoyltrifluoroacetone 976
SHIGEMATSU, T. Gas Chromatography of Rare Earth Chelates of Pivaloyltrifluoroacetone 1278
SHIMA, K. Photocycloaddition of Propionaldehyde to Ethyl Vinyl Ether..... 849
SHIMADA, A. See KURAHASHI, M., 2174.
SHIMADA, A. See NAKANO, E., 3367.
SHIMADA, A. See TAKUSAGAWA, F., 3366.
SHIMADA, S. See SATO, T., 766. 2731.
SHIMANOUCHI, H. An X-Ray Determination of the Structure of Chamaecynenol 334
SHIMANOUCHI, H. The Crystal and Molecular Structure of *N*-(*p*-Bromophenyl)-α-D-ribopyranosylamine 2,4-Phenylboronate.....1239
SHIMANOUCHI, T. See ABE, K., 3047.
SHIMIZU, I. Photoreversible Photographic Systems. V 1726
VI 1370
SHIMIZU, I. See KOBAYASHI, H., 2735.
SHIMIZU, T. Scandium Content of Igneous Rocks and Some Oceanic Sediments.....1561
SHIMIZU, T. See KONDO, S., 2050.
SHIMIZU, T. See SAEGUSA, T., 3535.
SHIMIZU, Y. See KUWATA, K., 864.
SHIMODAIRA, S. See MISAWA, T., 3339.
SHIMOISHI, Y. A Spectrophotometric Study of the Uranyl Chelate of 2-(1, 8-Dihydroxy-3,6-disulfo-2-naphthylazo)-phenoxyacetic Acid..... 690
SHIMURA, Y. See KAIZAKI, S., 988.
SHIMURA, Y. See KOINE, N., 1583. 1779.
SHIMURA, Y. See KOMORITA, T., 168. 1782.
SHIMURA, Y. See YAMASAKI, K., 119.
SHIMURA, Y. See YASUI, T., 2081.
SHIN, C. Synthesis of Albonoursin 191
SHINDO, M. On the Behavior of the Mixture of Trimethylstibine Sulfide and Tin(IV) Halides in Solution 265
SHINGU, H. See OKAMOTO, K., 1464. 3249. 3288. 3298.
SHINKAI, I. See TSUGE, O., 181. 185.
SHINODA, T. Vapor Pressure of Carbon Monoxide in Condensed Phases 2815
SHINODA, T. See ENOKIDO, H. 84. 3415.
SHINOMIYA, C. Hot-Atom Chemistry of Bromine. I 1437
II 2356
III.....2040
SHINOZAKI, F. See HIROTA, M., 2614.
SHINOZUKA, N. See HAYANO, S., 1469.
SHINRA, K. See MASUDA, I., 157. 2296.
SHINRA, K. See TAMAKI, M., 2858. 3190.
SHIOKAWA, T. Chemical Effects Associated with β-Decay Process. III 436
IV..... 696
SHIONOYA, S. See MATSUDA, Y., 356.
SHIRAHAMA, K. The Effects of Organic Additives on the Solubilities and CMC's of Potassium Alkyl Sulfates in Water. I 1206
II 2123
SHIRAI, T. See HAMADA, S., 1025.
SHIRAI, T. See YOSHIDA, N., 3131.
SHIROTA, T. See MIZUTANI, Y., 3324.
SHIROTANI, I. Electrical Conduction of TCNQ Ion Radical Salts under High Pressure 366
SHIROTANI, I. The Spectral Blue Shift of Li(TCNQ) at High Pressures.....2087
SHIROTANI, I. Fluorescence Spectra of Aromatic Hydrocarbons in Polystyrene under High Pressure 2387
SHISHIBORI, T. Stereochemical Studies of Monoterpene Compounds. VII.....3284

SHIZUKA, H. Photochemistry of Acetanilide. II.... 52
III..... 57
IV..... 909
SHIZUKA, H. The Photochemical Rearrangement of Phenyl Acetate 1831
SHONO, T. See TANAKA, M., 3190.
SHUTO, K. See TSUBOI, M., 102.
SINGH, J. J. See ANAND, S. K., 554.
SINGH, M. Studies on the Coagulation of Silver Sol: Effect of Dialysis, Non-electrolytes and Ageing on the Constants of Bhattacharya's Equation 551
SINGH, M. P. See GUPTA, K. C., 599.
SINGH, N. P. The Synthesis and the Properties of Some New Boroarsenites 1431
SINGH, R. S. See Baruah, G. D., 3572.
SINGH, R. S. See SINGH, S. N., 2048.
SINGH, S. K. See AGGARWAL, R. C., 2878. 3363.
SINGH, S. N. Triplet-Singlet Emission Spectrum of Acenaphthenequinone Vapour 2048
SINGH, S. N. See BARUAH, G. D., 3572.
SŌFUKU, S. A Novel Method for the Preparation of *p*-Methoxybenzyloxycarbonyl Amino Acids.... 278
SOHMA, A. Catalytic Hydrogenation of 1,3-Diphenylpropane-1,2-dione and 2-Hydroxy-1,3-diphenylpropan-1-one 1451
SOMEKAWA, K. The Diels-Alder Reactions of Polychloro-2,4-cylohcexadienones.....3499
SONODA, N. See JAVAID, K. A., 2056.
SONODA, N. See OMORI, A., 3233.
SOTOBAYASHI, T. Geochemical Fractionation of Induced Radionuclides in Fresh Nuclear Debris through the Atmosphere- Np-239 and Co-60 716
SRIVASTAVA, S. N. See JAIN, S. P., 1171.
SRIVASTAVA, S. N. See PRAKASH, C., 1787.
SRIVASTAVA, S. N. See SASTRY T. G., 291.
SUAMI, T. Aminocyclitols. XX.....2672
SUDA, H. See SUGA, S., 2920.
SUDA, Y. See MIZUTANI, Y., 3324.
SUDA, Y. See OKA, T., 3083.
SUDO, R. Reaction of Acyl Oxime with Mercaptan 1380
SUDO, R. See OKADA, I., 547.
SUEHIRO, T. Eine Dienon-Phenol-Umlagerung von 5-Oxo-2-methyl-4,4-dibenzyl-3-äthoxycarbonyl-4,5-dihydro-indol..... 737
SUEMITSU, R. Studies on Cow's Urine. V.....2368
SUĒTAKA, W. See MISAWA, T., 3339.
SUGA, H. See KOSAKI, A., 1525.
SUGA, H. See MATSUO, T., 1271.
SUGA, K. *N*-Alkylation of Primary and Secondary Amines by Alkyl Halides and Lithium Naphthalene 3606
SUGA, S. The Reaction of Cobalt Hydrocarbonyl with Vinylacetate, Crotonate, Styrene, and Acrylates 2029
SUGA, T. See SHISHIBORI, T., 3284.
SUGAHARA, Y. A Destructive Ethylation Reaction of Benzene with 3-Methylpentane-1-^{14}C.....2656
SUGI, Y. Studies on Hydrogenolysis. LIV.....2984
SUGINOME, H. Some Observations on Photolysis of Fused Cyclopentyl Nitrites 215
SUGISAKI, M. See MATSUO, T., 1271.
SUGITA, K. The Formation of 3-*n*-Butylamino-7-hydroxy-9-*n*-butyl-carbazolquinone(1,4) in the Reaction of *p*-Benzoquinone with *n*-Butylamine 2043
SUGITA, K. Amino-quinoid Polymeric System. The Thermal Reaction of 2,5-Bis-(*n*-butylamino)-*p*-benzoquinone 2695
SUGITA, K. See KUMANOTANI, J., 1130.
SUGIURA, K. Synthesis of 2-Amino-4-hydroxy-6-acetyl-7-methyl-7,8-dihydropteridine 2662
SUGIYAMA, N. Photochemistry of β-Acylacrylic Acids and Their Esters.....1098
SUGIYAMA, N. Photoreaction of Pseudoionone....1153
SUGIYAMA, N. The Photoreaction of β-Benzoylacrylic Acid.....1353
SUGIYAMA, N. A Novel Method for the Synthesis of 1-Phenyl-2,3-dihydro-4-pyridones 1357
SUGIYAMA, N. Photooxidation of Anthracene....1377
SUGIYAMA, N. Photoreaction of 2,6-Diphenyl-4*H*-thiopyran-4-one 3005
SUGIYAMA, N. See KANETA, M., 2084.
SUGIYAMA, N. See KASHIMA, C., 2389. 3596.
SUGIYAMA, N. See OMOTE, Y., 569. 1752. 2090. 3014. 3016.
SUHARA, Y. Preparation of Ethyl 19-Bromononadecanoate by a Mixed Coupling Reaction....3022
SUMIDA, Y. See KAGIYA, T., 1812. 2422.
SUMITOMO, H. Polymerization of *N*-Vinylcarbazole in the Presence of β-Cyanoacrolein 631
SUMITOMO, H. See NOBUTOKI, K., 1519.
SUMITOMO, H. See TAKEMURA, I., 634.
SUNAHARA, H. See MAKI, N., 3159.
SUNAMOTO, J. See MURAKAMI, Y., 3350.
SUNDARAM, P. K. Kinetics of Reactions of Amines with Alkene Oxides 3148
SUNTHANKAR, S. V. See NABAR, D. P., 2991.
SUZUKI, A. Kinetics of the Transition of Titanium Dioxide Prepared by Sulfate Process and Chloride Process 1853
SUZUKI, A. See ITOH, M., 3340.
SUZUKI, A. See SUAMI, T., 2672.
SUZUKI, H. A Possible Role of Diarylmethanes as the Intermediate for the Disproportionation of Methyl Groups in the Jacobsen Reaction 851
SUZUKI, H. Structure Proof of Diarylmethanes Formed in the Jacobsen Reaction of Monochlorotetramethylbenzenes 2618
SUZUKI, H. See KOYANO, K., 3306.
SUZUKI, I. Spectroscopic Investigation of Foreign Gas Effects upon CO_2 Laser Frequencies....3394
SUZUKI, J. Hydrodynamic Voltammetry with the Convection Electrode. III.....3487
SUZUKI, K. Studies on Fluorene Derivatives. XXV 1609
SUZUKI, K. Non-Newtonian Flow of Water-in-Oil Emulsions.....2773
SUZUKI, M. Formulas for One- and Two-center Moment Integrals between Slater Type *s*,*p*-Orbitals with Integer Effective Principal Quantum Numbers of 1 to 5 323
SUZUKI, M. Microwave Spectrum, Barrier to Internal Rotation, and Dipole Moment of *trans*-Crotonaldehyde.....2163
SUZUKI, M. The Acid-catalyzed Rearrangement of Laurinterol Derivatives 3342
SUZUKI, M. See IRIE, T., 843.
SUZUKI, M. See TAKIGUCHI, T., 2708.
SUZUKI, N. See AKIBA, K., 2537.
SUZUKI, N. See HOTTA, H., 2041. 3056.
SUZUKI, S. The Chemistry of Protactinium. VII..1916
VIII 2523

SUZUKI, S. See SUZUKI, I.,.....3394
SUZUKI, T. See SOTOBAYASHI, T., 716.
SUZUKI, T. See TAKEGAMI, Y., 848. 1060.
SUZUKI, Y. See MATSUSHITA, H., 460.
SUZUKI, Y. See SASAKI, T., 3335.
SUZUKI, Y. See WAKABAYASHI, K., 2924. 2931.
TABA, M. See AKAZA, I., 1291.
TABEI, K. The Nuclear Magnetic Resonance and Infrared Spectra of Aromatic Azomethines....1440
TABEI, K. Infrared Absorption Bands of Benzalanilines Observed in the 1200—850 cm^{-1} Region 2693
TABUSHI, M. See SHIGEMATSU, T., 976.
TACHIBANA, T. Mössbauer Spectral Observation of α-Fe_2O_3 Supported on Silica Gel during Activation 2180
TACHIBANA, T. Studies of Helical Aggregates of Molecules. I.....3422
TACHIKAWA, E. Isotope Effects on the Reactions of ^{82}Br Activated by Isomeric Transition between CH_4 and CD_4 2404
TACHIKAWA, E. See OKAMOTO, J., 1504.
TADA, M. See ENDO, H., 502. 506. 566.
TAGAKI, W. Reaction of p-Nitrophenyl Benzenesulfonates with Thiophenoxides 2894
TAGAKI, W. See KIKUKAWA, K., 831.
TAGAKI, W. See MINAMIDA, I., 3609.
TAGAKI, W. See OAE, S., 2899. 2903.
TAGAKI, W. See TOSHIYASU, Y., 1878.
TAHARA, T. The Micellar Properties of Disodium Monoalkyl Phosphates in Aqueous Solutions....1201
TAHARA, T. See SATAKE, I., 319.
TAJIMA, K. Adsorption of Surface Active Substance at Aqueous Surface Using Tritium Labeled Compounds : Adsorption from Mixed Aqueous Solution of Sodium Dodecylsulfate and Dodecanol....2471
TAKADA, K. See SAKAKIBARA, S., 809.
TAKADA, S. See YAMADA, K. 3011.
TAKAGI, M. See MURAKAMI, Y., 3478.
TAKAHASHI, H. See KUWAMURA, T., 1345.
TAKAHASHI, H. See OBARA, H., 560.
TAKAHASHI, K. NOZOE, T., 3277.
TAKAHASHI, M. See SAITO, K. 3462.
TAKAHASHI, S. The Synthesis of Regular Copolymers of Glycine and Alanine..... 521
TAKAHASHI, T. See SATOH, Y., 1465.
TAKAHASHI, T. See TANAHASHI, Y., 2076.
TAKAHASHI, Y. The Syntheses of Bisdithiobenzoylacetonates and Its Halogeno Derivatives from Dithiolium Salt 274
TAKAHASHI, Y. An X-Ray Emission Spectroscopic Investigation of the Chemical Bond of Sulfur. II 2707
III.....3064
TAKAISHI, T. On the Order of Isotopic Exchange Reactions 1266
TAKASHIMA, A. See FURUYA, Y., 1922.
TAKASHIMA, K. See MATSUMOTO, A., 1959.
TAKASHIMA, Y. The Mössbauer Spectrum of Iron Adsorbed on an Anion Exchange Resin.....1760
TAKAYA, H. A New Acidity Function, T_0, in Acid-catalyzed Reactions 2748
TAKEBAYASHI, M. Reactions of Diazoketones in the Presence of Metal Chelates. II 2938
TAKEDA, A. The Anodic Reaction of Acetic Acid in the Presence of Enanthaldehyde, Enanthaldehyde Diethyl Acetal, and 2-Octanone.....1047
TAKEDA, K. See SATO, K., 2319.
TAKEDA, M. See IIMURA, K., 2091.
TAKEDA, M. See NOZAWA, Y., 2431.
TAKEGAMI, Y. Studies of the Organic Reactions of Metal Carbonyls. XV 202
XVI 206
TAKEGAMI, Y. A Mechanism of the Syndiotactic Polymerization of α-Olefin.....848
TAKEGAMI, Y. The Insertion Reaction of Propylene into Metal-Ethyl Bonds in the Ziegler-Natta Catalyst 1060
TAKEGAMI, Y. The Hydrogenation Catalysts Prepared from Transition Metal Chloride and Triethylaluminum 1663
TAKEGAMI, Y. Studies of the Organic Reactions of Metal Carbonyls. XVII.....1992
TAKEGAMI, Y. See SUGA, S., 2920.
TAKEHARA, M. See MAEDA, I., 1435.
TAKEMOTO, K. See KUBUSHIRO, K., 3327.
TAKEMURA, I. Copolymerization of β-Cyanoacrolein with Acrylonitrile 634
TAKEMURA, I. See SUMITOMO, H., 631.
TAKEMURA, S. See TSUBOI, M., 102.
TAKEMURA, T. Effects of Substitution on the Phosphorescence Process of Aromatic Carbonyl Compounds,.....2756
TAKEMURA, T. See BABA H., 276.
TAKENAKA, N. See ARAKAWA, K., 5.
TAKENISHI, T. See YAMADA, Y., 1454.
TAKENISHI, T. See YOSHIKAWA, M., 3505.
TAKESADA, M. See YAMAZAKI, H., 275.
TAKESHITA, H. Preparation of Epicamphor.....2068
TAKEUCHI, A. A New Pair of Isomers of a Schiff Base Nickel(II) Complex 3046
TAKEUCHI, A. See YAMADA, S., 131. 2549.
TAKEUCHI, K. See KOSUGI, M., 3354.
TAKEUCHI, T. See EGUCHI, H., 3585.
TAKEUCHI, T. See OUCHI, A.. 2259.
TAKEUCHI, T. See TEZUKA, Y., 3447.
TAKEUCHI, T. See TSUGE, S., 2870.
TAKEYAMA, N. A Thermodynamic Formulation of Reaction Rates 3576
TAKI, K. Laser-induced Chemical Reaction. I .. 823
II 2377
TAKI, K. Reactive Specis in the Explosion of Silver Acetylide. I 2906
TAKIGUCHI, T. Preparation of Some Anilinosilanes 2708
TAKIMOTO, K. See MIURA, M., 1476.
TAKUSAGAWA, F. The Crystal Structure of Pyromellitic Acid Dihydrate (Benzene-1, 2, 4, 5-tetracarboxylic Acid Dihydrate) 3366
TAKUWA, A. See OHTA, H., 3019.
TAMAI, Y. Exo-electron Emission from Sandblasted Steel 1219
TAMAKI, M. Nitrosyl Complexes of Bis(acetylacetone)-, and Bis (benzoylacetone) -ethylenediimine Cobalt (II) 2858
TAMAKI, M. See MASUDA, I., 157.
TAMAMURA, T. See SAKANOUE, S., 2407.
TAMAMUSHI, R. See MATSUDA, K., 439.
TAMARU, H. Polymerization by the Active Species Produced from the Charge Transfer Complex. IV.....3041
V 3044
TAMARU, K. See FUKUDA, K., 1192.
TAMARU, K. See UENO, A., 3040.

TAMURA, H. See YONEYAMA, H., 1795.
TAMURA, Y. See SUZUKI, H., 851.
TANABE, K. See TSUZUKI, Y., 1052.
TANABE, T. See IZUMI, Y., 241.
TANAHASHI, Y. Proof of the Configuration at C_4 of Guaioxide.....2076
TANAKA, H. See ITAKURA, J., 1604.
TANAKA, I. See SHIZUKA, H., 909. 1831.
TANAKA, J. The Electronic Spectra and the Intermolecular Interaction of Würster's Ions in Crystals 1841
TANAKA, J. See OZEKI, K., 3076. 3390.
TANAKA, K. See AOKI, T., 545.
TANAKA, K. See KASAHARA, A., 1702.
TANAKA, M. Tautomerism in 3-Substituted-2,4-Pentanediones and Their Copper Chelates 3190
TANAKA, M. See TAMURA, H., 3041. 3044.
TANAKA, N. The Crystal Structure of Riboflavin Hydrobromide Monohydrate 1546
TANAKA, N. Electrochemical Behavior of Platinum in Solutions Containing Ethylenediaminetetraacetate 2300
TANAKA, N. Thermal Decomposition Reactions of Chromium (III) Complexes. Hexammine, Chloropentammine and *cis*-Dischlorotetrammine Complexes 2854
TANAKA, N. See ITO, T., 702.
TANAKA, N. See OGINO, H., 1578.
TANAKA, N. See SATO, Y., 1021.
TANAKA, N. See YAMADA, A., 1600.
TANAKA, S. See ASAHARA, T., 1996. 2337.
TANAKA, S. See FUKUI, K., 1398. 1971. 2380.
TANAKA, T. See MATSUBAYASHI, G., 2369.
TANASE, M. See SEKIZAKI, M., 399.
TANEI, T. An ESR Study of Photochemical Intermediates from Rigid Organic Solvents Containing Benzene 3369
TANI, M. See MIZUTANI, Y., 3324.
TANIDA, H, See TSUJI, T., 2033.
TANIGUCHI, M. Alternate Copolymerization of Acrylonitrile and Isobutylene 2728
TANIGUCHI, Y. See TOSHIYASU, Y., 1878.
TANIKAGA, R. Photolysis of Nitrosobenzene 210
TANIKAWA, K. Living Anionic Polymerization of 3-Vinylpyrene with Sodium-Naphthalene Complex 2406
TANIMOTO, M. Bond Lengths of Dimethylacetylene as Determined by Gas Electron Diffraction....2519
TANIUCHI, M. See KUNICHIKA, S., 1082.
TANNO, K. Reactions of Ions in the Radiolysis of Liquid Propane 2128
TANNO, K. See MIYAZAKI, T., 362.
TARAMA, K. The Adsorbed State of Oxygen on Vanadium Pentoxide Catalyst.....1161
TARAO, R. See SATO, H., 1588.
TARUMOTO, T. See YAMAMOTO, Y., 268.
TASHIRO, H. See MATSUMURA, K., 1741.
TASHIRO, M. See TSUGE, O., 181. 185.
TASHIRO, S. See TSUCHIYA, S., 847.
TATEMATSU, A. See NAKATA, H., 1678.
TATSUMI, S. See IZUMI, Y., 2273.
TATSUTA, J. See INOUYE, K., 308.
TATSUTA, K. See UMEZAWA, S., 529. 533. 537.
TAZAWA, H. See OMOTE, Y., 569. 3016.
TERADA, A. Amine Derivatives of 1-(1′-Phenyl-2′-bromoethyl)-5-methyltetrazole 2666
TERADA, M. See TSUBOI, M., 1871.
TERANISHI, S. See KAWAMOTO, K., 2688.
TERANISHI, S. See KISHIDA, S., 270.
TERATAKE, S. See TSUJI, T., 2033.
TERAUCHI, K. Ultraviolet Spectral Studies in the Esters of Aroylphosphonic Acids..... 821
TERAUCHI, K. Electron Spin Resonance Studies of Photo-irradiated Aroylphosphonates 2714
TERAWAKI, Y. See HATADA, K., 1781.
TEZUKA, Y. π -Allylic Coordination of Ethyl Acetoacetate to Palladium(II) 443
TEZUKA, Y. Effect of γ-Preirradiation on Catalytic Activity of Nickel Oxide for the Oxidation of Carbon Monoxide.....3447
THAKKAR, R. K. Chemical and Spectral Study of 6-and -7-nitro-2-Methyl, 2-Benzyl, 2-Styryl and 2-(1-Phenylstyryl)-3*H*-4-Ketoquinazolines and Their 3-Me and 3-ph Derivatives.....3198
THOMSON, J. B. See AKAGANE, K.,.....3204
TODA, F. Protonation of Allene. Evidence for the Formation of 1,1-Diphenyl-3, 3-dibromoprop-1-ene..... 567
TODA, F. Metal Acetate- and Alcohol-catalyzed Retropropargyl Rearrangement 829
TODA, F. Cyclopropenones. III.....1777
TODA, F. See IWAKURA, Y., 837. 841.
TODO, N. See TAKAYA, H., 2748.
TODA, T. The Nucleophilic Substitution Reactions of 2-Aminotropone Derivatives 2028
TÔEI, K. See MOTOMIZU, S., 1006. 2074.
TOGO, K. See MAEDA, I., 1435.
TOKIWA, F. Gel Filtration of Mixtures of Surfactants on Sephadex. II..... 575
TOKIWA, F. Electrophoretic Behavior of Micelles of a Polyether-sulfate Type Surfactant.....1216
TOKUDA, M. See ITOH, M., 3340.
TOKURA, N. See IINO, M., 3001.
TOKURA, N. See KONDO, Y., 1037. 1660. 1708.
TOKURA, N. See NAGAI, T., 1705.
TOKURA, N. See NOJIMA, M., 1351.
TOKUYAMA, K. See MAEDA, T., 492. 1668. 2021. 2635. 2648.
TOMIIE, Y. See AOKI, T., 545.
TOMINAGA, Y. See KODAMA, M., 394. 721. 724. 2267.
TOMIOKA, S. See OMOTE, Y., 2090.
TOMITA, K. See MIZUNO, H., 3099.
TOMITA, T. The Chromium(III) Complexes with Anthranilicdiacetic Acid 947
TOMODA, S. See TANAHASHI, Y., 2076.
TONOOKA, S. See KAKIMOTO, S., 2996.
TONOSAKI, K. The Spectrophotometric Determination of Thorium(IV) with Bromopyrogallol Red 456
TONOSAKI, K. See SAKAI, T., 2718.
TORI, K. See MAEDA, T., 2635.
TORII, S. See TAKEDA, A., 1047.
TORII, Y. Electronic Absorption Spectra of the Alkali Metal Complexes with Bipyridine.....2264
TORII, Y. See IWAKURA, Y., 837. 841.
TORIUCHI, Y. See YOKOTA, H., 2343.
TORU, T. See SASAKI, T., 1617. 3613.
TOSAKI, M. See YAMAGUCHI, G., 2801.
TOSHIYASU, Y. The Dipole Moments of Diphenyl Sulfide, Sulfoxide, Sulfone, and Their Derivaties 1878

TOYODA, K. An application of Mulliken's Theory of the Carge-transfer Complex to the Hydrogen-bonding Mechanism 1767
TSUBOI, M. Infrared Spectra of a Few Transfer Ribonucleic Acids 102
TSUBOI, M. Raman Effect in Ferroelectric Sodium Nitrite Crystal. II 1871
TSUBOI, M. See KAINOSHO, M., 1713.
TSUBOMURA, H. Competition between Photo-Ionization and Photo-Dissociation of Aromatic Compounds 3604
TSUBOMURA, H. See ARIMITSU, S., 1858.
TSUBOMURA, H. See KAWAI, K., 369.
TSUCHIHASHI, G. See OHNO, A., 3556.
TSUCHIYA, M. The Schotten-Baumann Reaction of Dimethylaminobenzyl Alcohols 1756
TSUCHIYA, M. See ASAHARA, T., 2416.
TSUCHIYA, R. Derivatographic Studies on Transition Metal Complexes. I.....1881
II 1886
TSUCHIYA, R. See FUJII, Y., 1301. 1569.
TSUCHIYA, R. See TOMITA, T., 947.
TSUCHIYA, R. See UEHARA, A., 2835.
TSUCHIYA, S. Ddcomposition of Ammonia and Reactivity of Nitrogen Absorbed on Molybdenum.. 344
TSUCHIYA, S. Mass Spectroscopic Detection of Methyl Radical in the Reaction of Hydrogen Atom with Etyhlene 847
TSUDA, K. Intrinsic Viscosity of Rigid Complex Molecules 850
TSUDA, M. Some Experiments on the Triplet State Mechanism of the Spectral Sensitization of Poly-(vinyl cinnamate) and Its Application for Searching New Sensitizers 905
TSUDA, M. See AIHARA, J., 1824.
TSUDA, S. Measurement of Negative Ions Formed by Electron Impact. I 607
II 614
III.....1515
IV.....2514
V 3115
TSUDA, S. See YOKOHATA, A., 2710.
TSUGE, O. Studies of Acenaphthene Derivatives. XVI 181
XVII 185
TSUGE, S. Pyrolysis-Gas Chromatographic Determination of Chlorine in Chlorine-Containing Synthetic Polymers 2870
TSUJI, J. Organic Syntheses by Means of Metal Complexes. II..... 527
TSUJI, J. See IMAMURA S., 805.
TSUJI, J. See KAJIMOTO, T., 827.
TSUJI, J. See MORI, Y., 777.
TSUJI, K. Radical Conversions in γ-Irradiated 3 Methylpentane-Isobutene Systems 2827
TSUJI, T. A Study of Valence Tautomerism of Cycloheptatriene-Norcaradiene 2033
TSUJI, T. Thermodynamic and X-Ray Studies of Solid Solutions of Silver Bromide and Sodium Bromide 2193
TSUJIHARA, K. Sulfilimine. I.....2631
TSUJIKAWA, I. See KOBAYASHI, H., 709.
TSUKAMOTO, G. Reactions of Thiamine Disulfide Monosulfoxides with Mercaptans 2566
TSUKAMOTO, G. Synthesis of Hypothiaminic Esters 2686
TSUMURA, T. See UMEZAWA, S., 529. 537.
TSUNAKAWA, S. Study on Fragmentation Process of Thymidine by Mattauch-Herzog Geometry High Resolution Mass Spectrograph..... 1
TSUNASHIMA, S. The Efficiencies of Hydrocarbons and Hydrogen in Quenching Triplet Cadmium Atoms 329
TSUNASHIMA, S. The Reactions of a Mixture of Benzene and *cis*-2-Butene Photosensitized by Cadmium.....1531
TSUNEDA, K. See NISHIMURA, S., 852.
TSUNODA, M. See WAKABAYASHI, K., 2924. 2931.
TSUTSUMI, S. See JAVAID, K. A., 2056.
TSUTSUMI, S. See OMORI, A., 3233.
TSUZUKI, K. See FUKUI, K., 2395.
TSUZUKI, Y. The Rotatory Dispersion and Stereochemistry of Organic Compounds. XV 1052
TSUZUKI, Y. See MORI, N., 482. 488.
TUKUDA, R. See SUZUKI, A., 1853.
UCHIDA, A. The Claisen-Schmidt Condensation of Acetonitrile with Aromatic Carbonyl Compounds 2989
UCHIDA, M. See SUAMI, T., 2672.
UCHIDA, Y. See MISONO, A., 580. 1383. 2303. 3470.
UCHIDA, Y. See OMORI, A., 3233.
UEDA, H. See HAMADA, K., 1297.
UEDA, K. See TAKEBAYASHI, M., 2938.
UEDA, S. See YAMAMURA, S., 1776.
UEDA, T. The Addition Reactions of Dialkyl Phosphites to Polyfluorocyclobutenes.....1684
UEDAIRA, H. Activity Coefficients of Aqueous Xylose and Maltose Solutions.....2137
UEDAIRA, H. Diffusion Coefficients of Xylose and Maltose in Aqueous Solution.....2140
UEDAIRA, H. See UEDAIRA, H., 2137. 2140.
UEHARA, A. The Chromium(III) Complexes with β-Aminoethylsulfonic-*N*,*N*-diacetic Acid and Aspartic-*N*,*N*-diacetic Acid 2835
UEHARA, A. See TSUCHIYA, R., 1881. 1886.
UEHARA, H. K-Band Electron Paramagnetic Resonance of Sulfur Monoxide in the Gaseous Phase.. 886
UEHARA, Y. See KUBOYAMA, A., 10.
UEKI, T. See KIMURA, T., 2479.
UEKI, T. See MATSUURA, Y., 881.
UENO, A. The Behaviour of Chemisorbed Species under the Reaction Conditions and the Mechanism of the Water-gas Shift Reaction on ZnO and MgO 3040
UENO, K. See MATSUMOTO, S., 960.
UENO, T. See TAKEGAMI, Y., 1663.
UESHIMA, T. See SAEGUSA, T., 248.
UESUGI, K. The Spectrophotometric Determination of Scandium with Chromal Blue G.....2051
UESUGI, K. The Spectrophotometric Determination of Scandium with Eriochrome Azurol G.....2398
UESUGI, K. The Spectrophotometric Determination of Beryllium with Chromal Blue G.....2998
UKIHASHI, H. See OTOUMA, H., 2449.
UMEGAKI, T. Crystal Growth of the Phosphate Coating on Iron and Steel.....1304
UMEGAKI, T. Influence of Impurities on Phosphate Coating Formation.....1555
UMEGAKI, T. Ultrasonic Effect on Phosphate Coating Formation.....2364
UMEMOTO, S. See TAKASHIMA, Y., 1760.

UMEZAWA, S. Studies of Aminosugars. XXI.... 529
XXII 533
XXIII 537
UMEZAWA, S. See KINOSHITA, M., 194. 854.
UMEZAWA, S. See YANAGISAWA, H., 1719.
UNEYAMA, K. See MINAMIDA, I., 3609.
UNO, K. See IWAKURA, Y., 741. 2882.
UNO, T. Infrared Spectra of Acylureas and *NN'*-Deuterated Acylureas..... 619
UNO, T. Infrared Spectra of Partially Deuterated Acetamide 897
UNO, T. Infrared Spectra of Biuret-hydrate and Its Deuterated Compound.....1539
URAGAMI, T. Studies on Formaldehyde-condensation Resin. VII 2426
URASAKI, I. See FURUYA, Y., 1769. 1922.
USAMI, S. Synthetic Studies of Cobalt Carbonyl by Noble Metal Catalysts.....2961
II 2966
USUI, Y. Reactions of Singlet Oxygen and Half-reduced Oxygen which are Produced Simultaneously by the Interaction of Triplet Dye and Oxygen 1231
UTSUMI, I. See TSUKAMOTO, G., 2566. 2686.
UTSUNOMIYA, K. See SHIGEMATSU, T., 1278.
UZU, Y. Freezing of the Droplets of Aqueous Solution Aerosols 1807
WADA, G. Basicity of Dimethyl Sulfoxide in an Aqueous Solution as Measured by the Spectrophotometric Indicator Method 890
WADA, G. The Effects of Tetraalkylammonium Salts on the Structure and the Temperature of the Maximum Density of Water 2498
WADA, K. The Preparation of Copper(I) Complex Containing Organic Halide..... 562
WADA, S. See TAKEDA, A., 1047.
WAKABAYASHI, K. Studies on *s*-Triazines. I.....2924
II 2931
WAKABAYASHI, M. See SATO, T., 773.
WAKAHARA, S. See MAEDA, T., 1668. 2021.
WAKATSUKA, H. See SATO, T., 1955.
WAKATSUKI, Y. π Complexes of Vinyl Alcohol and Propenyl Alcohol with Platinum(II)..... 273
WAKAYAMA, T. A Comparative Study of Electron Capture by Solutes in γ-Irradiated 2-Methyltetrahydrofuran Glass at 77°K 266
WAKAYAMA, T. Radical Formation in the Radiolysis of Solid Isobutane as Studied by ESR Spectroscopy.....1164
WAKAYAMA, T. See MIYAZAKI, T., 2086.
WAKI, M. See AOYAGI, H., 782.
WAKITA, H. See SAKURAI, K., 2725.
WATANABE, A. Synthesis and Physical Properties of Long Chain Compounds. X.....1360
WATANABE, K. Preparation of Pentacyanotriphenylphosphine- and Tetracyano-bis(triphenylphosphine)cobaltate(III) 1150
WATANABE, K. See SATO, M., 1976.
WATANABE, M. See KODERA, K., 3036.
WATANABE, S. The Reaction of 3-Chloro-benzo[*d*] isothiazole with Thiophenols.....1152
WATANABE, S. See SHISHIBORI, T., 3284.
WATANABE, S. See SUGA, K., 3606.
WATANABE, T. Study of Wall Effect on the Flow of Polyvinylpyrrolidone Solutions in Capillary.... 583
WATANABE, T. See MINESHITA, T., 594.
WATANABE, T. See SUZUKI, K., 2773.
WATANABE, T. See TSUKAMOTO, G., 2566. 2686.
WATANABE, Y. See SUGA, S., 2920.
WATANABE, Y. See TAKEGAMI, Y., 202. 1992.
WATANUKI, K. See FURUHASHI, A. 260.
YABE, K. See TAKAHASHI, Y., 2707. 3064.
YABE, S. See KUBOYAMA, A., 10.
YABUNE, H. See OTSUJI, Y., 732.
YAJIMA, S. See IZUMI , Y., 241.
YAMABE, H. See YONEZAWA, T., 76.
YAMABE, T. Theory of the Gel-forming Polymerization of Polyepoxy and Related Compounds..2112
YAMABE, T. See FUKUI, K., 312. 1862.
YAMABE, T. See OHKUBO, K., 1880. 2220.
YAMADA, A. Determination of Kinetic Parameters of the Electrode Reaction of Ethylenediaminetetraacetatoaquochromate(III) Ions by the Potentiostatic Method 1600
YAMADA, B. See OTSU, T., 3207.
YAMADA, H. See KIMURA, K., 3032.
YAMADA, K. Synthesis of 2-Methoxycarbonyl-5-methyl-7-methoxy-8-isopropyl-tetrahydronaphthalen-1-one and Rearrangement of Isopropyl Group of γ-(5-Isopropyl-4-methoxy-2-methylphenyl)-butyric Acid in Polyphosphoric Acid Cyclization 3011
YAMADA, K. See SUGIYAMA, N., 1098. 1153. 1353. 1377. 3005.
YAMADA, S. Nickel(II) and Copper(II) Complexes of *C,N*-Disubstituted Salicylideneimines with Steric Hindrance 131
YAMADA, S. The Oxovanadium(IV) Complexes of Schiff Bases Obtained from Substituted Salicylaldehydes and Alkyl Amines..... 152
YAMADA, S. Chromium(III) Complexes Containing Bis(salicylaldehyde)ethylenediiminate as a Ligand 1463
YAMADA, S. Palladium(II) Complexes of *N*-Substituted Salicylideneimines 2543
YAMADA, S. Dioxouranium(VI) Complexes of Schiff Bases Obtained from Substituted Salicylaldehydes and Alkyl Amines.....2549
YAMADA, S. Metal Complexes of Schiff Bases Obtained from Substituted Salicylaldehydes and 2-Aminopyridine Derivatives 2562
YAMADA, S. See KUGE, Y., 2552.
YAMADA, S. See TAKEUCHI, A., 3046.
YAMADA, T. Triazene Rearrangement. III 3565
YAMADA, T. See IMAI, H., 237.
YAMADA, Y. Synthesis of 4,8-Diaminopyrimido-[5, 4-*d*]pyrimidine form Hydrogen Cyanide in Liquid Ammonia 1454
YAMADA, Y. Electron Spin Resonance Studies of the Formation of Anion Radicals on γ-Irradiated Silica Gel.....1836
YAMADA, Y. See HASEGAWA, A., 846.
YAMADERA, A. See OKA, Y., 981.
YAMAGAI, K. See MIZUIKE, A., 253.
YAMAGATA, M. See SAKURAI, G., 1461.
YAMAGUCHI, G. Refinement of the Structure of Tohdite $5Al_2O_3 \cdot H_2O$ 2247
YAMAGUCHI, G. Effects of Cation Vacancies of the Diffusion of Nickel Ions in Defective Spinels....2801
YAMAGUCHI, M. See ICHINOHE, Y., 3038.
YAMAGUCHI, G. See KUBO, Y., 1897.
YAMAMOTO, H. See HAYAKAWA, T., 497. 1937.

YAMAMOTO, H. See NOZOE, T., 3277.
YAMAMOTO, H. See OMOTE, Y., 2090. 3014.
YAMANOTO, H. See SAMEJIMA, H., 2722.
YAMAMOTO, K. See CHUBACHI, S., 789.
YAMAMOTO, K. See FUJII, Y., 3451.
YAMAMOTO, K. See MAKI, N., 3159.
YAMAMOTO, M. See HASHIMOTO, S., 2733.
YAMAMOTO, M. See KASHIMA, C., 2389. 3596.
YAMAMOTO, M. See SUGIYAMA, N., 1357. 2690.
YAMAMOTO, N. See ICHIKAWA, K., 3045.
YAMAMOTO, N. See KAWAI, K., 369.
YAMAMOTO, T. Effects of Substituents on the Chain-transfer Reactivities of Nuclear-substituted Benzaldehydes to Polymer Radicals 1364
YAMAMOTO, T. See UENO, A., 3040.
YAMAMOTO, Y. The Spectrophotometric Determination of Anions by Solvent Extraction with Metal Chelate Cations. V..... 268
YAMAMOTO, Y. Cobalt(IV) Ammine Complexes 5-Nitrosalicylato of Similar Ligands. II 984
III..... 999
YAMAMOTO, Y. The Spectrophotometric Determination of Anions by Solvent Extraction with Metal Chelate Cations. XLI 1774
YAMAMOTO, Y. Reactions of Isocyanides with Carbon Tetrahalogenides in the Presence of Dicobalt Octacarbonyl 2077
YAMAMOTO, Y. See KOBAYASHI, H., 709.
YAMAMURA, S. A Convenient Synthesis of 3,4-Dialkyl-5-carbomethoxy-2-pyrone.....1776
YAMANAKA, H. See ANDO, T., 2013.
YAMANE, R. Concentration Polarization Phenomena in Ion-exchange Membrane Electrodialysis. II 2741
YAMANE, R. See SATA, T., 279.
YAMANOUCHI, K. See YAMADA, S., 131. 2543. 2562.
YAMASAKI, K. The Optical Resolution and Circular Dichroism of Cobalt(III) Complexes of the $[Co(O\text{-}O)_2(O\text{-}N)]^{2-}$ Type..... 119
YAMASAKI, K. See SEKIZAKI, M., 399.
YAMASAKI, T. See NANJO, M., 968. 972.
YAMASHITA, K. See IMAI, H., 578. 1142.
YAMASHITA, T. Surface Potential Study of Stearic Aicd Monolayer on Mercury 1145
YAMATERA, H. Hydrogen-Deuterium Exchange of Several Optically Active Complexes of Cobalt-(III) in DO Solutions.....3042
YAMATERA, H. See MIKI, E., 3007.
YAMAUCHI, J. See FUJITO, T., 3334.
YAMAZAKI, H. New Five-corrdinate Iridium Complexes 275
YAMAZAKI, H. See KATAYAMA, M., 2410.
YAMAZAKI, H. See YASUFUKU, K., 3049.
YAMAZAKI, I. See BABA, H., 276.
YAMAZAKI, R. See KUBOYAMA, A., 10.
YAMAZAKI, T. See KASHIMA, J., 542.
YANAGIDA, S. See SUAMI, T., 2672.
YANAGISAWA, H. The Synthesis of Cyclic α-Amino Acids. III.....1719
YANAGISAWA, H. See KINOSHITA, M., 194.
YANAGITA, M. See KAWABE, H., 1029. 3109.
YANO, K. See HAYASHI, S., 3591.
YANO, N. See KAWAGUCHI, H., 136.
YANO, S. Nuclear Magnetic Resonance Study of Metal Complexes. I 3184
YANO, Y. See OAE, S., 1110.
YASUDA, M. The Viscosities of Aqueous Solutions Containing Metal Complexes. II 2547
YASUFUKU, K. New Type Acetylene Complexes with Mixed Transition Metals 3049
YASUHARA, Y. A Study of the Mechanism of the Carboxylation of Potassium Phenoxide by Means of the Carbon-14 Tracer Technique.....2070
YASUI, T. Metal Complexes of Amino Acids. IV 2081
YASUNAGA, T. Temperature-jump Studies of the Kinetics of the Formation of the Monochloro and Monobromo Complexes of Iron(III).....2165
YASUOKA, N. The Crystal Structure of Two Crystalline Polymorphs of *N*-(*p*-Methoxyphenyl-3-propyl)-*p*-bromobenzamide..... 91
YASUOKA, N. See KIMURA, T., 2479.
YASUOKA, N. See MATSUURA, Y., 881.
YASUOKA, N. See SAKANOUE, S., 2408.
YAZAKI, T. See TORII, Y., 2264.
YOKOHATA, A. Solvated Electron Formed in Water by the Silent Electric Discharge in Argon Atmosphere..... 658
YOKOHATA, A. Some Remarks on the Reactions of Ferricyanide Ions with Hydrogen Atoms in Alkaline Aqueous Solutions.....2710
YOKOHATA, A. See TSUDA, S., 607. 614. 1515. 2514. 3115.
YOKOI, H. An ESR Study of the Copper(II) Complexes of DL-α-Alanine and L-α-Alanine 2085
YOKOI, H. ESR and Optical Absorption Studies of the Copper(II) Complexes of Ethylenediamine and Its Alkyl Derivatives.....2187
YOKOI, H. ESR Studies of Bis-(*N*,*N*-diethylethylenediamine)copper(II) Perchlorate.....2232
YOKOKAWA, T. See KODAMA, H., 681.
YOKOKAWA, T. See MAEKAWA, T., 677. 2102.
YOKOTA, H. A Cationic Polymerization of Formaldehyde in Liquid Carbon Dioxide. V 1412
YOKOTA, H. Copolymerization of Formaldehyde and Succinic Anhydride in the Presence of Carbon Dioxide.....2343
YOKOYAMA, A. See OTANI, S., 1417.
YOKOYAMA, C. See IWASE, A., 2243. 3155.
YOKOYAMA, Y. Photochemical Analysis. I 2254
YOKOYAMA, Y. See ITOH, M., 3340.
YONEDA, H. Ethylene Proton Exchange in Cobalt-(III) EDTA Complex as Evidenced by Nuclear Magnetic Resonance 1160
YONEDA, H. See BABA, T., 2697.
YONEDA, H. See YAMAMOTO, Y., 984.
YONENO, H. See OTSU, T., 3207.
YONEYAMA, H. Role of Doped Lithium in Nickel Monoxide in the Formation of Higher Valency Nickel Oxides by Anodic Oxidation.....1795
YONEZAWA, T. Electronic Structure of Lone Pairs. I..... 76
YONEZAWA, T. Electron Spin Resonance Study of Radicals Formed by Abstracting Hydrogen from Amides 650
YONEZAWA, T. The Electronic Structures of Unstable Intermediates. Benzyne and Hetarynes 933
YONEZAWA, T. A Theoretical Interpretation of Substituent Effects on the H–H and ^{13}C–H Spin Coupling Constants for CH_3X, $(CH_2)_2X$, and $CH_2{=}CHX$ Derivatives 1248

YONEZAWA, T. Photochemical Reactions of Some Thioparabanates 2323
YONEZAWA, T. Semi-empirical Unrestricted SCF-MO Treatment for Valence Electron Systems. I.. 2437
YONEZAWA, T. See KATO, H., 923.
YOSHIDA, H. Reaction of Xanthates with *t*-Amines. VI 1948
YOSHIDA, H. See KUMAMOTO, K., 3245.
YOSHIDA, H. See TSUCHIYA, M., 1756.
YOSHIDA, K. Anodic Oxidations. I 2411
YOSHIDA, K. See OHTA, H., 3019.
YOSHIDA, N. On the Viscosity of Liquid Oligotrifluorochloroethylene 3131
YOSHIDA, N. See HAMADA, S., 1025.
YOSHIDA, R. See MAEDA, I., 1435.
YOSHIDA, S. See MISONO, A., 1383. 2303.
YOSHIDA, S. See SASAKI, K., 1744.
YOSHIDA, S. See TARAMA, K., 1161.
YOSHIDA, Z. Intermolecular Hydrogen Bond Involving a π Base as the Proton Acceptor. VI.. 3254
VII 3259
IX 3263
YOSHIFUJI, A. See NOGUCHI, M., 2286.
YOSHIHARA, M., See TOSHIYASU, Y., 1878.
YOSHIKAWA, M. Studies of Phosphorylation. III 3505
YOSHIKAWA, T. See KUMANOTANI, J., 1130.
YOSHIKAWA, Y. See OAE, S., 2899. 2903.
YOSHIMORI, T. Coulometric Titration of a Microamount of Water after Conversion to Ammonia 1282
YOSHIMURA, J. Aminosugars. XVII 2352
YOSHIMURA, J. See FUNABASHI, M., 2885.
YOSHIMURA, J. See OHGO, Y., 728. 2957.
YOSHIMURA, M. A New Monoclinic Phase of Cerium Orthovanadate ($CeVO_4$) 3195
YOSHIMURA, M. See SUEMITSU, R., 2368.
YOSHINO, H. See NISHIMURA, S., 499.
YOSHINO, T. See INAZU, T., 2291.
YOSHINO, T. See OKAWA, H., 1934.
YOSHIOKA, H. See SAEGUSA, T., 3310.
YOSHIOKA, M. See SUGIYAMA, N., 1153. 1377.
YOSHIOKA, T. See MURAYAMA, K., 1640. 1942. 2307.
YOSHIOKA, T. See SASAKI, T., 258. 556. 826. 3008. 3335.
YOSHIOKA, T. See TACHIBANA, T., 2180.
YOSHIZAWA, R. Characterization and Some Reactions of Peroxy-*trans*-crotonic Acid 3238
YU, B. S. See KYOGOKU, Y., 1387.
YUKAWA, Y. The Wolff Rearrangement. V 802
YUKI, H. Anionic Copolymerization of Isoprene and 1,1-Diphenylethylene 1644
YUKI, H. Anionic Copolymerization of 2,3-Dimethyl butadiene and 1,1-Diphenylethylene with *n*-Butyllithium in Benzene 1754
YUKI, H. Preparation of Vinyl Ethers by Transetherification in the Presence of Molecular Sieves 3546
YUKI, H. See OKAMOTO, Y., 760.
ZEN, S. Synthetic Reactions of Aliphatic Nitro-Compounds. III 1761